SONY

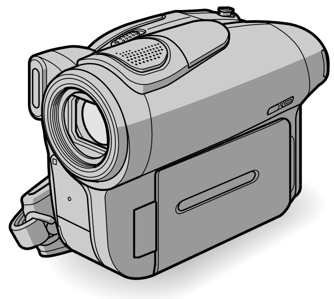
2-587-623-**12** (1)

Digital Video Camera Recorder

HANDYCAM

Operating Guide

DCR-DVD92E/DVD202E/DVD203E/ DVD403E/DVD602E/DVD653E/ DVD703E/DVD803E



http://www.sony.net/

Printed on 100% recycled paper using VOC (Volatile Organic Compound)-free vegetable oil based ink.

Printed in Japan

2587623120

Read this first

Before operating the unit, please read this manual thoroughly, and retain it for future reference.

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

CAUTION

The use of optical instruments with this product will increase eye hazard. Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

FOR CUSTOMERS IN THE UNITED KINGDOM

NOTICE ON THE SUPPLIED AC ADAPTOR

A moulded plug complying with BS1363 is fitted to this equipment for your safety and convenience.

Should the fuse in the plug supplied need to be replaced, a fuse of the same rating as the supplied one and approved by ASTA or BSI to BS1362 (i.e., marked with ASA or mark) must be used. If the plug supplied with this equipment has a detachable fuse cover, be sure to attach the fuse cover after you change the fuse. Never use the plug without the fuse cover.

If you should lose the fuse cover, please contact your nearest Sony service station.

For the customers in Europe

CLASS 1 LASER PRODUCT
LASER KLASSE 1
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

ATTENTION

The electromagnetic fields at the specific frequencies may influence the picture and sound of this camcorder.
This product has been tested and found compliant with the limits set out in the EMC Directive for using connection cables shorter than 3 meters. (9.8 feet)

Notice

If static electricity or electromagnetism causes data transfer to discontinue midway (fail), restart the application or disconnect and connect the USB cable again.

For customers in the U.S.A.

"Battery pack"
THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.

If you have any questions about this product, you may call:
Sony Customer Information Center
1-800-222-SONY (7669).
The number below is for the FCC related matters only.

Regulatory Information

Declaration of Conformity

Declaration of Conformity
Trade Name: SONY
Model No.: DCR-DVD653E
Responsible Party:Sony Electronics Inc.
Address: 16450 W. Bernardo Dr, San Diego, CA 92127 U.S.A.
Telephone No.: 858-942-2230
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Declaration of Conformity

Declaration of Conformity

Trade Name: SONY

Model No.: DCR-DVD703E

Responsible Party:Sony Electronics Inc.

Address: 16450 W. Bernardo Dr, San Diego, CA 92127 U.S.A.

Telephone No.: 858-942-2230

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Declaration of Conformity

Declaration of Conformity

Trade Name: SONY

Model No.: DCR-DVD803E

Responsible Party:Sony Electronics Inc.

Address: 16450 W. Bernardo Dr, San Diego, CA 92127 U.S.A.

Telephone No.: 858-942-2230

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CAUTION

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Note

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

– Reorient or relocate the receiving antenna.
– Increase the separation between the equipment and receiver.
– Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
– Consult the dealer or an experienced radio/TV technician for help.

The supplied interface cable must be used with the equipment in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.

Notes on use

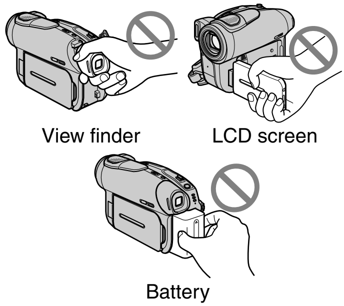
Your camcorder is supplied with two kinds of operations guides.

– "Operating guide" (This manual)
– "First Step Guide" for using the supplied software (stored on the supplied CD-ROM)*

*DCR-DVD92E/DVD202E/DVD602E do not include a "First Step Guide".

On using the camcorder

• Do not hold the camcorder by the following parts.



- To prevent discs from being broken or recorded pictures from being lost, do not do the following when either of the respective lamps of the POWER switch (p.20) or the ACCESS lamp (p.24) is on:
  – to remove the battery pack or AC Adaptor from the camcorder.
  – to apply mechanical shock or vibration to the camcorder.
- Before connecting your camcorder to another device with a USB cable etc., be sure to insert the connector plug in the proper direction. If you insert the connector plug forcibly in the wrong direction, the terminal may be damaged, or this may cause a malfunction of your camcorder.

Notes on the Setup items, LCD screen, viewfinder, and lens

- A setup item that is grayed out is not available under the current recording or playback conditions.
- The LCD screen and the viewfinder are manufactured using extremely high-precision technology, so over 99.99% of the pixels are operational for effective use. However, there may be some tiny black points and/or bright points (white, red, blue, or green in color) that appear constantly on the LCD screen and the viewfinder. These points are normal.
- Exposing the LCD screen, the viewfinder, or the lens to direct sunlight for long periods of time may cause malfunctions. Be careful when placing the camera near a window or outdoors.
- Do not aim at the sun. Doing so might cause your camcorder to malfunction. Take pictures of the sun only in low light conditions, such as at dusk.

On recording

- Before starting to record, test the recording function to make sure the picture and sound are recorded without any problems. You cannot delete images once you record them on a DVD-R. Use a DVD-RW/DVD+RW (not supplied) for trial recording (p.13).
- Compensation for the contents of recordings cannot be provided, even if recording or playback is not possible due to a malfunction of the camcorder, storage media, etc.
- TV color systems differ depending on the countries/regions. To view your recordings on a TV, you need a PAL system-based TV.
- Television programs, films, video tapes, and other materials may be copyrighted. Unauthorized recording of such materials may be contrary to the copyright laws. You cannot dub copyright protected software on your camcorder.

On this manual

- The images of the LCD screen and the viewfinder used on this manual are captured using a digital still camera, and thus may appear different from what you see.
- The on-screen displays in each local language are used for illustrating the operating procedures. Change the screen language before using your camcorder if necessary (p.69).
- The illustration used on this manual are based on the model DCR-DVD403E.

About the Carl Zeiss lens

Your camcorder is equipped with a Carl Zeiss lens, which was developed jointly by Carl Zeiss, in Germany, and Sony Corporation, and produces superior images. It adopts the MTF* measurement system for video cameras and offers a quality typical of a Carl Zeiss lens.

* MTF stands for Modulation Transfer Function. The number value indicates the amount of light from a subject coming into the lens.

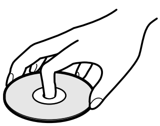
About the disc

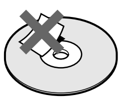
- You can use 8cm DVD-Rs, 8cm DVD-RWs and 8cm DVD+RWs only. Use the discs with marks listed below.

- For reliability durability of recording/playback, we recommend that you use Sony discs or discs with a *for VIDEO CAMERA* mark for your DVD Handycam. Using a disc other than above may cause the unsatisfactory recording/playback or you may not be able to remove the disc from your DVD Handycam.
  *Depending on the place you bought, the disc has a *for VIDEO CAMERA pour CAMESCOPE* mark.

Notes on use

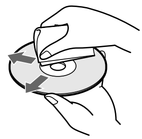
- Hold the disc by its edge while supporting the center hole lightly. Do not touch the recording side (the opposite of the printed side when using a single sided disc).
- Before shooting, be sure to remove dust and fingerprints from the disc with the cleaning cloth supplied with your camcorder.
  Otherwise you may not be able to record or play normally in some situations using that disc.
- When you set the disc in your camcorder, press firmly until it clicks. When the message [C:13:□□] appears on the LCD screen, open the disc cover and set the disc again.
- Do not attach any adhesive material such as a sticker on the surface of a disc. If you do so, the disc may become unbalanced, and this may cause a malfunction of the disc or your camcorder.





Care and storage of the discs

- Keep the disc clean, or the quality of the audio and video output may deteriorate.
- Clean the disc with the supplied cleaning cloth.
  Wipe the disc from the center out. For dirt, clean the disc with a soft cloth slightly moistened in water, then remove the moisture with a soft, dry cloth. Do not use solvents such as benzine, cleaners intended for vinyl LPs or antistatic splay, as they may cause a malfunction to the disc.



- Do not expose the disc to direct sunlight or leave it in a humid place.
- When you carry or store the disc, put it in its case.
- When you want to write letters or marks, etc. on a single sided disc, write only on the printed side using an oil-based marker with a felt-tip, and do not touch the ink until it dries. Do not heat the disc or use a sharp-pointed tool, such as ball point pen. Do not dry the surface by heating. You cannot write on, or mark, on the double-sided discs.

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Using the Setup items

Editing on DVD Handycam (DVD-RW:VR mode)

Dubbing

Using a Computer (Except for DCR-DVD92E/DVD202E/DVD602E)

Troubleshooting

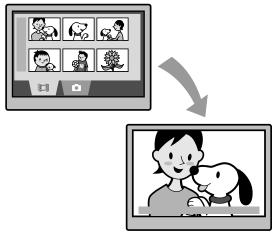
Additional Information

What you can do with your DVD Handycam

Your DVD Handycam records images on an 8cm DVD* disc.
You can enjoy your DVD Handycam in ways that are different from those of other media. This makes it easier to record and view images.

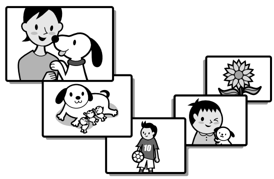
A VISUAL INDEX screen that shows the disc contents at a glance

Movies and still images are recorded on the same disc. You can find the desired scene quickly using this convenient index (p.29, 33).



A Slide show that plays back still images, one after another

You can play back still images one after another using the Slide show function. You can also enjoy the Slide show on a DVD player if you finalize** the disc (p.30, 44).



Using your DVD Handycam

Preparing



(p.16)

Recording



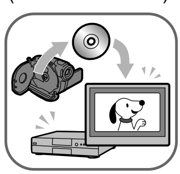
(p.28, 32)

Playing back on the DVD Handycam



(p.29, 33)

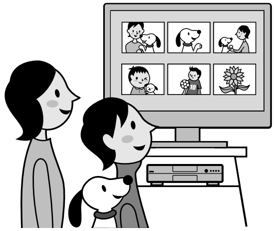
Playing back on DVD players
(Finalize** the disc)



(p.30, 44)

Playing back the recorded disc on other DVD devices

You can play back a disc on other DVD players or on the DVD drive of a computer if you finalize** it. You can also create a DVD menu that helps you to find the desired image quickly, from a list of thumbnails (p.30, 44).



Editing a disc using the supplied software

You can create your own DVD discs adding special effects or music to images using the Picture Package software supplied with your camcorder (p.82).

- The DCR-DVD92E/DVD202E/DVD602E do not support a computer connection.



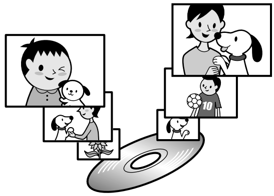
* DVD (Digital Versatile Disc) is a high capacity optical disc which enables you to record images. In this manual, an 8cm DVD disc is described as a "disc."

** Finalizing means converting a recorded disc so that it can be played back on other DVD playback equipment (p.30, 44). After finalizing a disc, you may not be able to record on it again on your DVD Handycam, depending on the disc type and the recording format (p.13).

DVD functions different from those of tape media

Easy to record, then to play back recordings without rewinding

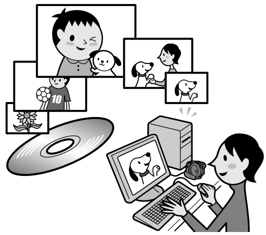
You can start recording and check the recorded images without rewinding or fast forwarding. Images are stored on the free space on the disc automatically. Therefore, you will not delete important images accidentally.



Transferring data to your computer at high speed

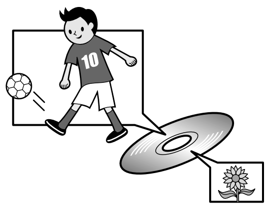
You can import data to your computer in less time than the actual recording time. If your computer supports Hi-Speed USB (USB 2.0), you can transfer data at a faster rate.

- The DCR-DVD92E/DVD202E/DVD602E do not support a computer connection.



Adjusting the image quality that suits each scene

You can record images on a disc utilizing the disc capacity more effectively thanks to the VBR* encoding system that adjusts image quality automatically according to the scene being recorded. Recording an object that moves fast requires more space to record clear images on a disc. Therefore, the available recording time may be shorten than normal.



* VBR stands for Variable Bit Rate. This feature enables your DVD Handycam to adjust the bit rate (recording capacity per a certain time) automatically in accordance with each of the recorded scenes.

Choosing a disc

What kinds of disc can I use?

The kinds of disc that you can use in your DVD Handycam are as follows.
When you use a DVD-RW, you can choose the recording format from VIDEO mode or VR mode.

Disc type and the recording format	8cm DVD-R	8cm DVD-RW		8cm DVD+RW
		VIDEO mode	VR mode	
Marks used in this manual	DVD -R 8cm	DVD -RW 8cm VIDEO mode	DVD -RW 8cm VR mode	DVD +RW 8cm
Features	This kind of disc can be recorded only once	This kind of disc can be overwritten repeatedly, even when the disc is full, if you format* it.		

- Use Sony discs or discs with a for VIDEO CAMERA TM mark. Depending on the place you bought, the disc has a for VIDEO CAMERA pour CAMESCOPE TM mark.

DVD -RW 8cm Differences in the recording format on DVD-RWs

VIDEO mode has wide compatibility with other players.

VR mode (Video Recording mode) enables you to edit, such as deleting or dividing scenes, the material you have recorded on your DVD Handycam. Once you finalize the disc, you can play back the disc with a DVD player that supports VR mode.

- Refer to the specifications of your playback equipment for additional compatibility information.

Note on DVD+RW

If you playback the DVD+RW recorded in 16:9 (p.26, 60) on a DVD player connected to a 4:3 TV which does not support 16:9 pictures, the picture will appear compressed lengthwise. If the DVD+RW is recorded in the default setting, the picture will appear in 4:3 ratio when it is played back under the above condition.

- Refer to the instruction manuals supplied with your TV.

Examples of incompatible discs

- 12cm DVD-R
- 12cm DVD-RW
- 12cm DVD+RW
- DVD+R
- DVD-RAM
- DVD-ROM
- CD
- CD-R
- CD-ROM
- CD-RW

* Formatting makes a disc ready for recording. Also, formatting removes all images data from a previously recorded disc, allowing you to recover the full capacity of that disc. Therefore, you can use the disc repeatedly (p.51).

Do the features differ according to the disc?

What you can do with your disc differs, depending on the disc type and the recording format used.

The number in the parentheses indicates the reference page.

Disc type		DVD -R 8cm	DVD -RW 8cm VIDEO mode	DVD -RW 8cm VR mode	DVD +RW 8cm
Recording movies and still images	(28, 32)	●	●	●	●
Playing back the last scene immediately	(38)	●	●	●	●
Deleting the last scene immediately	(38)	–	●	●	●
Playing back recordings on other DVD players if you finalize the disc[1]	(30, 44)	●	●	●	●
Playing back recordings on other DVD players even if you do not finalize the disc[1]	(44)	–	–	–	●[2]
Creating the DVD menu when you finalize the disc	(45)	●	●	–	●
Recording additional scenes after finalizing the disc	(50)	–	●[3]	●	●[4]
Using the disc repeatedly by formatting it	(51)	–	●	●	●
Editing images on your DVD Handycam	(72)	–	–	●	–
Transferring recorded scenes to your computer and editing them	(82)	●	●	●	●

[1] DVD discs recorded by Sony DVD Handycam are designed to be played back on home DVD players, DVD recorders, and computer DVD drives. DVD-RWs recorded in the VR mode must be played back on DVD playback equipment that supports the VR mode. Note that playback on all home DVD players, DVD recorders, and computer DVD drives may not be guaranteed. Refer to the specifications of your playback equipment for additional compatibility information.

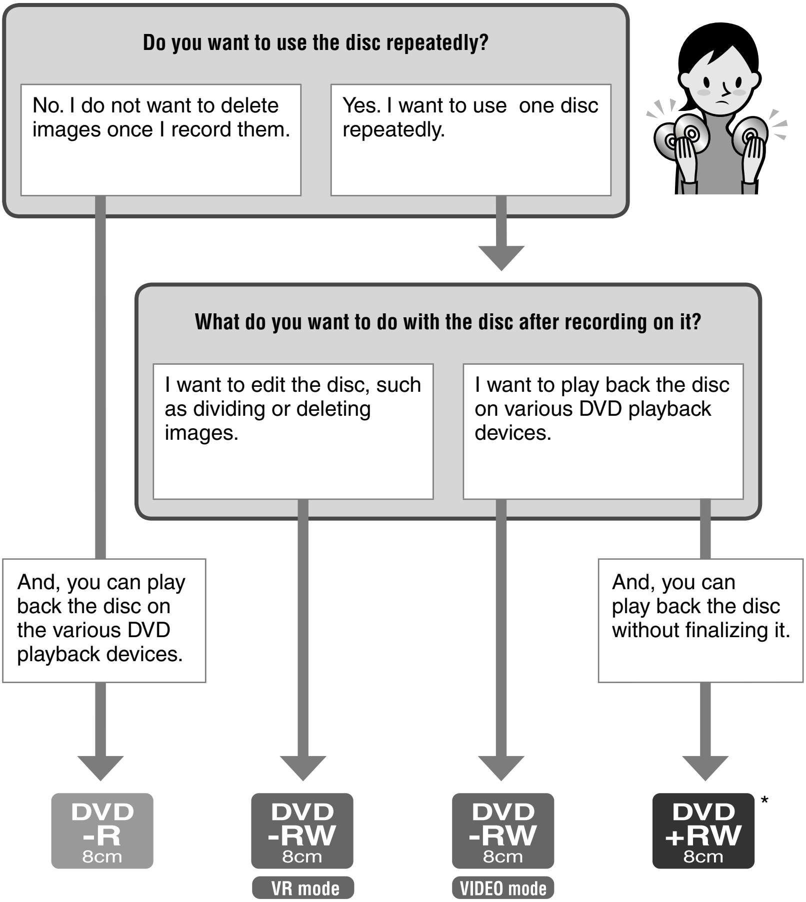
[2] Do not try to playback these discs in the DVD-ROM drive on your computer. This may cause a malfunction.

[3] Unfinalizing is required (p.50).

[4] A confirmation dialog asking you if you want to record additional material appears (p.50).

How to choose a disc

The figure below helps you to choose the best disc for your purpose.



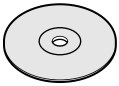
Did you find the disc type that suits your purpose?
Now, enjoy your DVD Handycam.

* When you play back pictures recorded in 16:9 (p.26, 60) on a DVD+RW with a DVD player or a DVD recorder, they may appear to be compressed in the lengthwise direction.

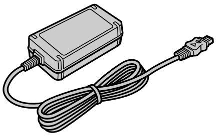
Step 1: Checking supplied items

Make sure that you have following items supplied with your camcorder.
The number in the parentheses indicates the number of that item supplied.

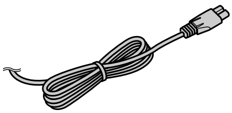
8cm DVD-R DMR30 (1) (p.13)
(Except for DCR-DVD92E/DVD602E)



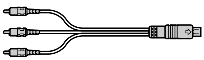
AC Adaptor (1) (p.17)



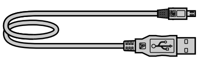
Mains lead (1) (p.17)



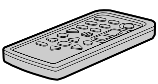
A/V connecting cable (1) (p.42, 78)



USB cable (1) (p.82)
(Except for DCR-DVD92E/DVD202E/DVD602E)



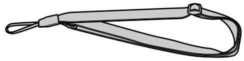
Wireless Remote Commander (1) (p.41)
(Except for DCR-DVD92E/DVD602E)



A button-type lithium battery is already installed.

Cleaning cloth (1)

Shoulder strap (1) (p.113)



Shoe cover (1) (p.81)
(Except for DCR-DVD403E/DVD803E)
Attached to the camcorder.

Lens cap (1) (p.20)
(DCR-DVD92E/DVD602E)
Attached to the camcorder.

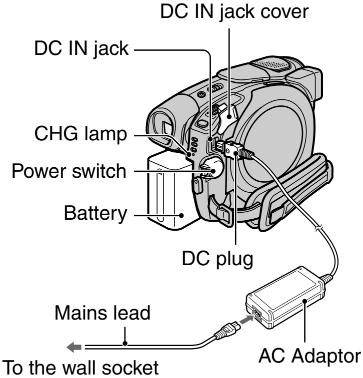
Rechargeable battery pack (1) (p.18)
NP-FP50: Except for DCR-DVD403E/DVD803E
NP-FP70: DCR-DVD403E/DVD803E

CD-ROM "PicturePackage Ver.1.8" (1) (p.82)
(Except for DCR-DVD92E/DVD202E/DVD602E)

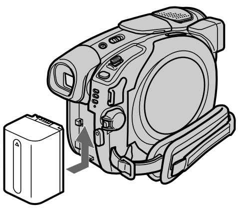
Operating Guide (This manual) (1)

Step 2: Charging the battery pack

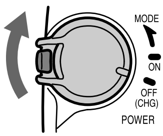
You can charge the battery after attaching the "InfoLITHIUM" battery pack (P series) (p.107) to your camcorder.



1 **Slide the battery pack in the direction of the arrow until it clicks.**

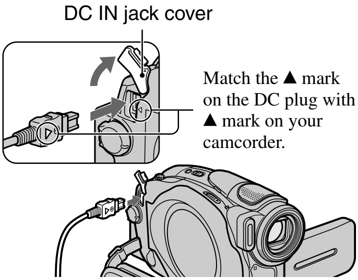


2 **Slide the POWER switch in the direction of the arrow to set it to OFF (CHG) (The default setting).**



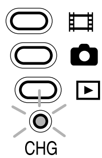
3 **Connect the AC Adaptor to the DC IN jack on your camcorder.**

Open the DC IN jack cover to connect the AC Adaptor.



4 **Connect the AC Adaptor to the wall socket using the mains lead.**

The CHG (charge) lamp lights up and charging starts.



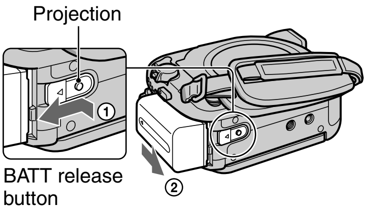
5 **The CHG (charge) lamp turns off when the battery is fully charged. Disconnect the AC Adaptor from the DC IN jack on your camcorder.**

Disconnect the AC Adaptor holding both your camcorder and the DC plug.

Getting Started

To remove a battery pack

Slide the BATT release button in the direction of the arrow while pressing down the projection in the center of the BATT release button (①), slide the battery pack towards the back of your camcorder, then remove the battery pack (②).



• When you remove the battery pack, make sure that none of the respective lamps of the POWER switch (p.20) is on.

When storing the battery pack

Use up the battery pack completely if you do not intend to use it for a long time (p.107).

To use an outside power source

Make the same connections as you do when charging the battery pack. The battery pack will not lose its charge in this case.

Charging time (full charge)

Approximate time (min.) required when you fully charge a fully discharged battery pack.

Battery pack	Charging time
NP-FP50*	130
NP-FP70**	160
NP-FP90	220

* Supplied with the models except for DCR-DVD403E/DVD803E.

** Supplied with DCR-DVD403E/DVD803E.

Recording time

Approximate time (min.) available when you use a fully charged battery pack.

For DCR-DVD92E/DVD602E/DVD653E

Battery pack	Continuous recording time	Typical recording time
NP-FP50 (supplied)	80 85 90	35 40 40
NP-FP70	170 185 190	80 90 90
NP-FP90	300 335 345	145 165 170

For DCR-DVD202E/DVD203E/DVD703E

Battery pack	Continuous recording time	Typical recording time
NP-FP50 (supplied)	75 85 90	35 40 40
NP-FP70	160 180 190	70 85 90
NP-FP90	290 320 345	140 155 170

For DCR-DVD403E/DVD803E

Battery pack	Continuous recording time	Typical recording time
NP-FP50	55 60 60	25 25 25
NP-FP70 (supplied)	120 125 130	55 60 60
NP-FP90	215 230 235	105 110 115

If you record under the following conditions:
Top: When the LCD backlight turns on.
Middle: When the LCD backlight turns off.
Bottom: Recording time when recording with the viewfinder while the LCD screen is closed.

Playback time

Approximate time (min.) available when you use a fully charged battery pack.

For DCR-DVD92E/DVD602E/DVD653E

Battery pack	LCD screen opened*	LCD screen closed
NP-FP50 (supplied)	105	125
NP-FP70	225	265
NP-FP90	400	475

For DCR-DVD202E/DVD203E/DVD703E

Battery pack	LCD screen opened*	LCD screen closed
NP-FP50 (supplied)	90	110
NP-FP70	190	235
NP-FP90	345	415

For DCR-DVD403E/DVD803E

Battery pack	LCD screen opened*	LCD screen closed
NP-FP50	90	105
NP-FP70 (supplied)	190	225
NP-FP90	345	400

* When the LCD backlight turns on.

On the battery pack

- Before changing the battery pack, slide the POWER switch up to OFF (CHG).
- The CHG (charge) lamp flashes during charging, or BATTERY INFO (p.37) will not be correctly displayed under the following conditions.
  – The battery pack is not attached correctly.
  – The battery pack is damaged.
  – The battery pack is fully discharged. (For BATTERY INFO only.)
- The power will not be supplied from the battery as long as the AC Adaptor is connected to the DC IN jack of your camcorder, even when the mains lead is disconnected from the wall socket.
- We recommend that you use an NP-FP70 or NP-FP90 battery pack when a video light (optional) is attached.

On the charging/recording/playback time

- Times measured with the camcorder at 25 °C (77°F). (10-30°C (50-86°F) is recommended.)
- Available recording and playback time will be shorter when you use your camcorder in low temperatures.
- The available recording and playback time will be shorter depending on the conditions under which you use your camcorder.

On the AC Adaptor

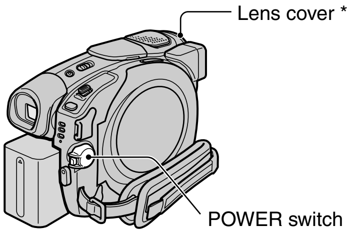
- Use the nearby wall socket when using the AC Adaptor. Disconnect the AC Adaptor from the wall socket immediately if any malfunction occurs while using your camcorder.
- Do not use the AC Adaptor placed in a narrow space, such as between a wall and furniture.
- Do not short-circuit the DC plug of the AC Adaptor or battery terminal with any metallic objects. This may cause a malfunction.

PRECAUTION

- Even if your camcorder is turned off, AC power (mains) is still supplied to it while connected to the wall socket via the AC Adaptor.

Step 3: Turning the power on, and holding your camcorder

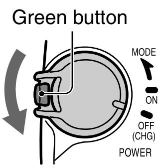
To record or play back, slide the POWER switch to turn on the respective lamp. When using it for the first time, the [CLOCK SET] screen appears (p.23).



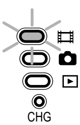
* Except for DCR-DVD92E/DVD602E

1 **Turn on the power by sliding the POWER switch in the direction of the arrow while pressing the green button in the center.**

When you record or play back, switch the power mode by sliding the POWER switch in the direction of the arrow until the respective lamp lights up.



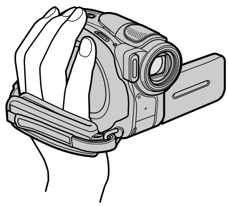
(Movie): To record movies
(Still): To record still images
(Play/Edit): To play back pictures on your camcorder, or to edit them (DVD-RW: VR mode only)



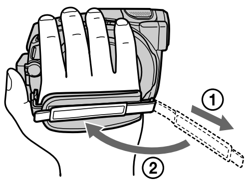
- When you set the POWER switch to (Movie) or (Still), the lens cover opens up (Except for DCR-DVD92E/DVD602E).
- After you have set the date and time ([CLOCK SET], p.23), the next time you turn on the power of your camcorder, the current date and time will be displayed on the LCD screen for a few seconds.

2 **Remove the lens cap by pressing both knobs on the sides of the cap (DCR-DVD92E/DVD602E).**

3 **Hold your camcorder correctly.**



4 **Ensure a good grip, then fasten the belt.**



To turn off the power

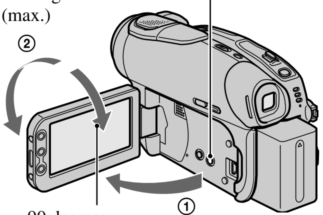
Slide the POWER switch up to OFF (CHG).

- At the time of purchase, the power will be set to turn off automatically if you leave your camcorder without any operation attempted for approximately 5 minutes, to save battery power. ([A.SHUT OFF], p.69).

Step 4: Adjusting the LCD screen and viewfinder

The LCD screen

Open the LCD screen 90 degrees to the camcorder (①), then rotate it to the best angle to record or play (②).



- Be careful not to press the buttons on the LCD frame accidentally when you open or adjust the LCD screen.
- If you open the LCD screen 90 degrees to the camcorder, then rotate it 180 degrees to the lens side, you can close it with the LCD screen side facing out. This is convenient during playback operations.

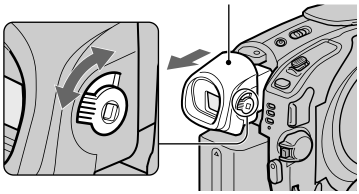
To darken the LCD screen

Press and hold DISP/BATT INFO for a few seconds until [LCD OFF icon] appears.
This setting is practical when you use your camcorder in bright conditions or you want to save battery power. The recorded picture will not be affected by the setting. To cancel, press and hold DISP/BATT INFO until [LCD OFF icon] disappears.

- See [LCD/VF SET] - [LCD BRIGHT] (p.66) to adjust the brightness of the LCD screen.

The viewfinder

You can view pictures using the viewfinder to avoid wearing down the battery, or when the picture seen on the LCD screen is poor.

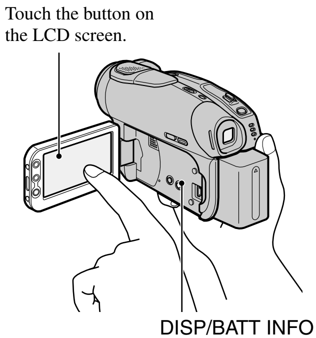


- You can adjust the brightness of the viewfinder backlight by selecting [LCD/VF SET] - [VF B.LIGHT] (p.67).
The recorded picture will not be affected by the setting.

Step 5: Using the touch panel

You can play back recorded pictures (p.29, 33), or change the settings (p.52) using the touch panel.

Touch the buttons displayed on the screen.



- Perform the same actions as explained above when you press the buttons on the LCD frame or alongside of the LCD screen.
- Be careful not to press buttons on the LCD frame accidentally while using the touch panel.

To hide the screen indicators

Press DISP/BATT INFO to toggle the screen indicators (such as counter, etc.) on or off.

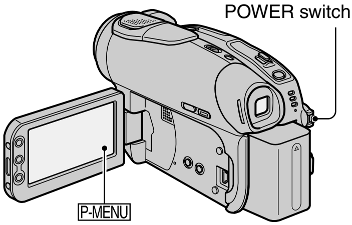
Changing the language setting

You can change the on-screen displays to show messages in a specified language. Select the screen language in [LANGUAGE] on the TIME/ LANGU. (p.69).

Step 6: Setting the date and time

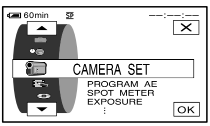
Set the date and time when using this camcorder for the first time. If you do not set the date and time, the [CLOCK SET] screen appears every time you turn on your camcorder or slide the POWER switch down.

- If you do not use your camcorder for **about 3 months**, the built-in rechargeable battery gets discharged and the date and time settings may be cleared from the memory. In that case, charge the rechargeable battery and then set the date and time again (p.111).

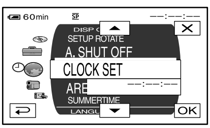


Skip to step **4** when you set the clock for the first time.

1 Touch P-MENU → [SETUP].

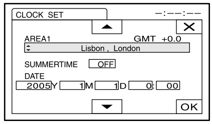


2 Select TIME/LANGU. with ▲ / ▼, then touch OK.

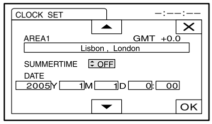


3 Select [CLOCK SET] with ▲/▼, then touch OK.

4 Select the desired geographical area with ▲/▼, then touch OK.

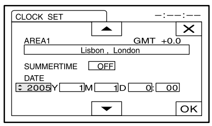


5 Set [SUMMERTIME] to [ON] with ▲/▼, if necessary, then touch OK.



6 Set [Y] (year) with ▲/▼, then touch OK.

You can set any year up to the year 2079.



7 Set [M] (month), [D] (day), hour and minute, then touch OK.

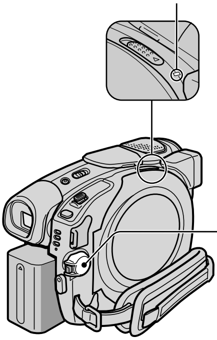
The clock starts.

- Refer to page 106 for information concerning "World time difference."

Step 7: Inserting a disc

A new 8cm DVD-R, DVD-RW, or DVD+RW is required for recording (p.13).

- **Remove dust or fingerprints from the disc beforehand, using the cleaning cloth supplied with your camcorder (p.5).**

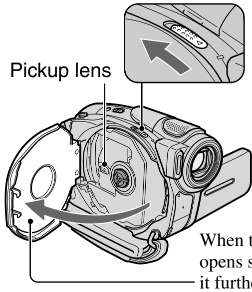


1 Check that the power of your camcorder is on.

- You can remove the disc when a power source is connected to your camcorder even when your camcorder is turned off. However, the disc recognition process (step **4**) does not start.

2 Slide the disc cover OPEN switch in the direction of the arrow (OPEN ▶).

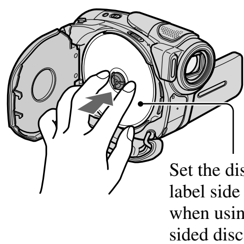
[PREPARING TO OPEN] appears on the LCD screen. Then the opening melody sounds once, and the camcorder beeps. After the beeps stop, the disc cover opens slightly automatically.



- Be careful not to obstruct the operation with your hand or other objects, etc., when opening or closing the disc cover. Move the belt to the bottom of the camcorder, then open or close the disc cover.
- If you catch the belt or the lens cap strap* when closing the disc cover, it may cause your camcorder to malfunction.

*DCR-DVD92E/DVD602E.

3 Set the disc with the recording side facing your camcorder, then press the center of the disc until it clicks.



- Do not touch the disc with the recording side or pickup lens. For details about pickup lens, see page 111.

4 Close the disc cover.

Your camcorder starts recognizing the inserted disc.
It may take some time to recognize the disc depending on the disc type and condition.

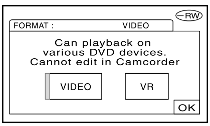
■DVD-R
You can start recording immediately after [DISC ACCESS] disappears from the LCD screen. You do not need to proceed to steps after step **5**.

■DVD-RW
Select the recording format, then format the disc. Proceed to step **5**.

■DVD+RW
The [FORMAT] screen appears.
Proceed to step **6**.

- During Easy Handycam operation (p.27), [Format the disc? If not, remove the disc.] appears. Touch OK, then proceed to step **7**.

5 Select the recording format for a DVD-RW, and touch OK.



■VIDEO mode
You can play back the disc on most of DVD players if you finalize it.

■VR mode
You can edit, delete pictures, or divide movies on your camcorder (p.72).
However, the disc can be played back only on DVD players that support VR mode when you finalize it.

6 Touch [YES] → [YES].

7 Touch OK when [Completed.] appears.

When the formatting is completed, you can start recording on the DVD-RW or the DVD+RW.

- Do not remove the battery pack or disconnect the AC adaptor while formatting.

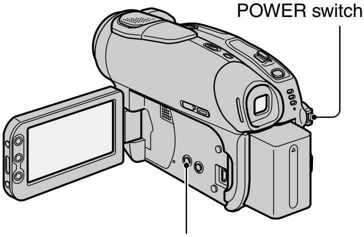
To remove the disc

Perform steps **1** and **2** to open the disc cover, then remove the disc.
It may take some time to remove the disc depending on the disc condition or recorded materials.
It may take up to 30 minutes to remove a disc if it is damaged or is dirty with fingerprints, etc.

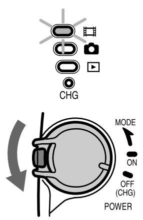
- Do not apply shock or vibration to your camcorder while the ACCESS lamp lights up or flashes, or [DISC ACCESS] or [PREPARING TO OPEN] is displayed on the LCD screen.
- If you close the disc cover with the disc set incorrectly, it may cause your camcorder to malfunction.
- After your camcorder recognizes the disc, disc information such as the date you started to use it and information on previously recorded areas appears for about 8 seconds. The information on previously recorded areas may not be displayed correctly depending on the condition of the disc.
- To delete all of the previously recorded pictures from a DVD-RW/DVD+RW, then to use it again to record new pictures, see “Deleting all of the scenes on the disc (Formatting)” on page 51.

Step 8: Selecting the aspect ratio (16:9 or 4:3) of the recording picture (DCR-DVD202E/ DVD203E/DVD403E/DVD703E/DVD803E)

By recording in the 16:9 (wide) mode, you can enjoy wide-angle, high-resolution pictures.
If you intend to view pictures on a wide TV, recording in the 16:9 (wide) mode is recommended.



1 **Slide the POWER switch down to light up the 🎞 (Movie) lamp.**



2 **Press WIDE SELECT repeatedly to select the desired screen aspect ratio.**

16:9*



4:3*



* When viewing on the LCD screen. It may be different in the viewfinder.

- You cannot change the aspect ratio in the following cases:
  - when the POWER switch is set to 📷 (Still).
  - while recording movies
  - when [D.EFFECT] is set to [OLD MOVIE] (p.64).
- Differences in the angle of view between 4:3 and 16:9 vary depending on the zoom position.
- When recording on a DVD-R/DVD-RW (VIDEO mode)/DVD+RW, the available recording time may be shorter in the following situations.
  - when you record pictures while toggling between 16:9 and 4:3.
  - when you change the [REC MODE] during 4:3 (p.65).

To play back pictures after connecting your camcorder to a TV

Set [TV TYPE] to [16:9] or [4:3] according to your TV (16:9/4:3) (p.42).

- When viewing 16:9 pictures with [TV TYPE] set to [4:3], pictures may appear rough depending on subjects.

To play back images on a DVD player or a DVD recorder

The way you see pictures on the TV screen may differ depending on your player. For details, refer to the instruction manuals supplied with the devices you are using.

- When you play back pictures recorded in 16:9 on a DVD+RW with a DVD player or a DVD recorder, they may appear to be compressed in the lengthwise direction.

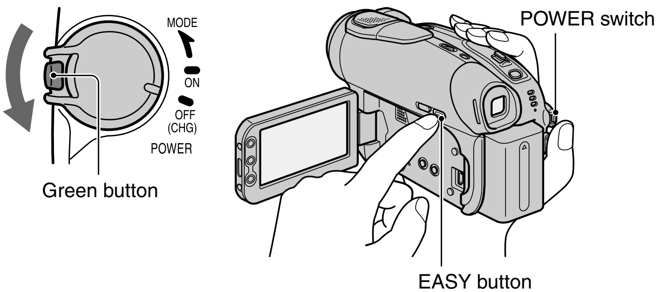
Operate your camcorder with ease

With this Easy Handycam operation, most of the camera settings are automatically adjusted optimally, which frees you from detailed adjustment.
Since only basic functions become available and screen font size increases for easy viewing, even first time users can enjoy easy operation.
Complete the preparations described in steps 1 to 8 (p.16 to 26) before operation.

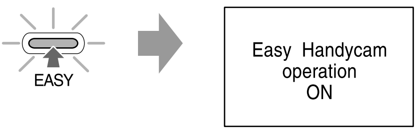
- When inserting a new DVD-RW, it formatted with VIDEO mode.
- When using a DVD-RW disc formatted in VR mode, you cannot use the editing function (p.72).

If you do not intend to use the Easy Handycam operation, go to page 32.

1 Turn on the power by sliding the POWER switch in the direction of the arrow while pressing the green button in the center.



2 Press EASY.



Now try recording ⇨

To cancel Easy Handycam

Press EASY again.
The EASY lamp turns off.

- If you turn off the power without canceling Easy Handycam operation, your camcorder turns on in Easy Handycam operation automatically when you turn on the power.

During Easy Handycam operation

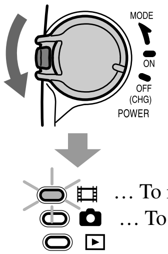
- You cannot use some buttons or switches (p.28, 29), and some setup items (p.54).
- If you set an invalid operation, [Invalid during Easy Handycam operation] appears.

Recording with ease

During the Easy Handycam operation, Movies [REC MODE], Still images [QUALITY] and [IMAGE SIZE] are recorded with the default settings (p.62, 65).

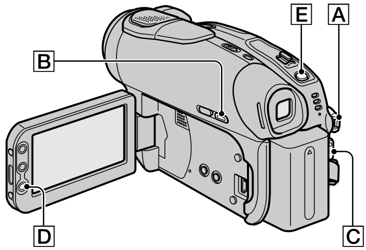
1 Slide the POWER switch [A] down repeatedly to light up the (Movie) or (Still) lamp.

Make sure the EASY lamp [B] lights up in blue. If not, press EASY to light it up (p.27).



… To record movies

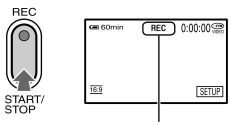
… To record still images



2 Start recording.

Movies

Press REC START/STOP [C] (or [D]).

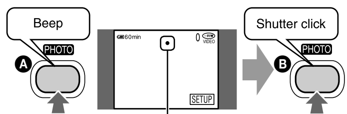


[STBY] ➔ [REC]

To stop recording, press it again.

Still Images

Press PHOTO [E] lightly to adjust the focus (A), then press it fully (B).



Flashing ➔Lights up

A shutter sound is heard. When ▮▮▮▮ disappears, the image has been recorded.

To record the next images

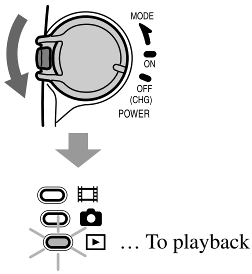
Perform step **2**.

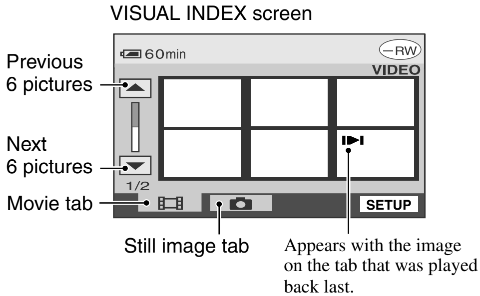
- You can continue recording if you have not finalized the disc (p.30) and there is still space to record on the disc when:
  - you turn off the power, then turn it on again.
  - you remove a disc from your camcorder, then insert it again.
- When you record in Easy Handycam operation, you cannot use following functions:
  - BACK LIGHT (p.35)
  - Turning off the backlight of the LCD screen (p.21)
  - Checking/Deleting the last scene (p.38)

Playing back with ease

1 Slide the POWER switch A down repeatedly to light up the ▶ (Play/Edit) lamp.

The VISUAL INDEX screen appears on the LCD screen.
Make sure the EASY lamp B lights up in blue. If not, press EASY to light it up (p.27).

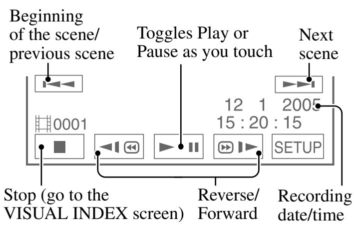




2 Start playing back.

Movies

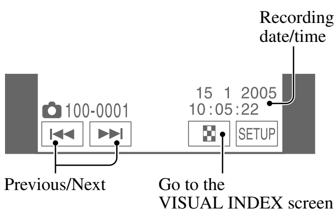
Touch the Movie tab, then the movie to be played back.



When the selected movie has played back to the end, the screen returns to the VISUAL INDEX screen.

Still Images

Touch the Still image tab, then the still image to be played back.



- Touch ◀I⏪/⏩I▶ during pause to play back movie slowly.
- When you touch a movie marked with I▶I, you can play it back from the point you have stopped previously.
  When you record another new image, I▶I appears with the image.
- When you playback during Easy Handycam operation, you cannot use following functions:
  – PB ZOOM (p.36)
  – Turning off the backlight of the LCD screen (p.21)

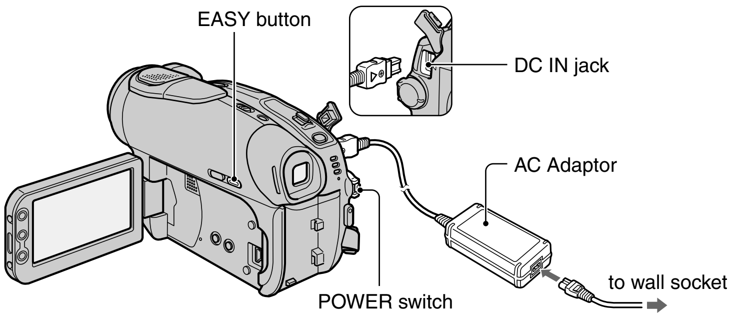
Preparation for playing back on a DVD player (Finalizing)

With Easy Handycam operation, your DVD Handycam sets up the following options automatically. Therefore, you can finalize a disc easily.
– creating a DVD menu to display images as thumbnails on a DVD player, etc (p.45).
– creating a photomovie to playback still images on a DVD player, etc (p.46).

If you want to customize the settings above and finalize a disc, cancel Easy Handycam operation, then finalize the disc normally (p.44).

- **A DVD-R cannot be overwritten once you finalize it even when there is space to record.**
- **If you finalize a DVD-RW (VIDEO mode)/DVD+RW, you cannot record additional material on the disc during Easy Handycam operation. Cancel Easy Handycam operation, then follow the steps shown on page 50.**

1 Place your camcorder in a stable position. Connect the AC Adaptor to the DC IN jack on your camcorder.



- Be sure to use the AC adaptor to prevent your camcorder from running out of power during finalizing.

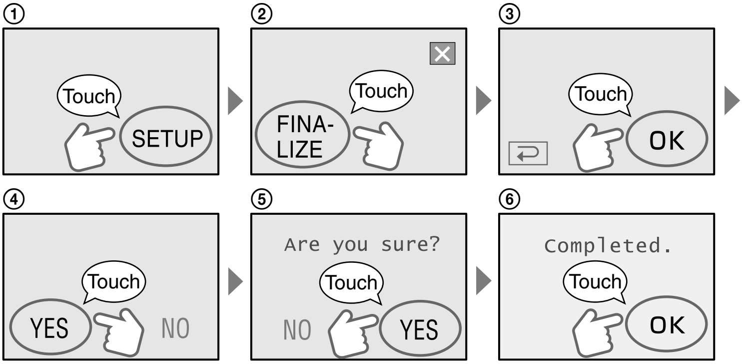
2 Turn on your camcorder and make sure the EASY lamp lights up.

When the EASY lamp turns off, press EASY to set the Easy Handycam operation to ON.

3 Insert the disc to be finalized.

See "Step 7: Inserting a disc" on page 24 for details.

4 Touch the LCD screen in the following steps.



- Do not apply shock or vibration to your camcorder, and do not disconnect the AC adaptor during finalizing.
- The shorter the amount of material recorded, the longer it takes for finalizing.

5 Remove the disc from your camcorder.

Enjoy watching images on the DVD player, etc.
Refer also to the instruction manuals supplied with the DVD player, etc.

Deleting all the scenes after playback (format) (DVD-RW:VIDEO mode/DVD+RW)

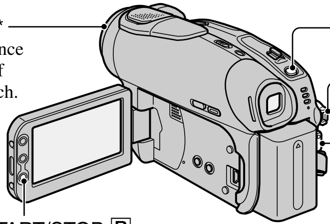
If you format the disc, the disc recovers recording used capacity and is reusable for recording thereafter.
If you want to reuse a DVD-RW to record in VR mode, format the disc after canceling Easy Handycam operation (p.51).

- **Note that you cannot recover a scene once you delete it.**

Touch the LCD screen in the following steps.

① [SETUP]
② [FORMAT]
③ [YES]
④ [YES]
⑤ OK

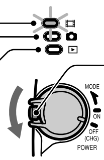
Recording



* Except for DCR-DVD92E/DVD602E

1 Slide the POWER switch down repeatedly to light up the respective lamp.

🎞 : To record movies
📷 : To record still images
▶ : To playback/edit

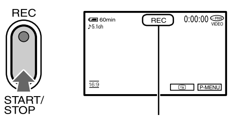


Slide the POWER switch in the direction of the arrow while pressing the green button only when the POWER switch is in the OFF (CHG) position.

2 Start recording.

Movies 🎞

Press REC START/STOP [A] (or [B]).

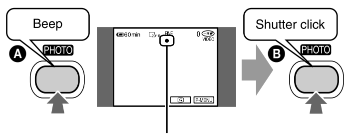


[STBY] ➔ [REC]

To stop recording, press it again.

Still Images 📷

Press PHOTO lightly to adjust the focus (A), then press it fully (B).



Flashing ➔Lights up

A shutter sound is heard. When ▮▮▮▮ disappears, the image has been recorded.

To check or delete the last recording (Review/Review deleting)

See page 38.

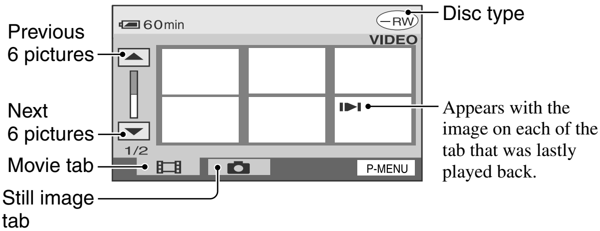
To record the new movies/still images

Even if you remove the disc, you can continue recording if there is still space to record on the disc.
Perform step **2**.

Playback

1 Slide the POWER switch down repeatedly to light up the ▶ (Play/Edit) lamp.

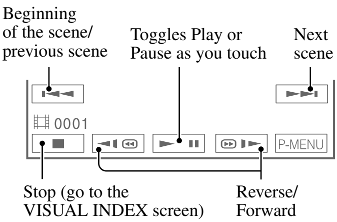
The VISUAL INDEX screen appears on the LCD screen.



2 Start playing back.

Movies

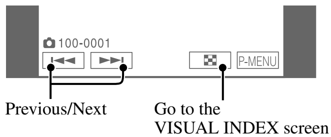
Touch the Movie tab, then the movie to be played back.



When the selected movie is played back until the end, the screen returns to the VISUAL INDEX screen.

Still Images

Touch the Still image tab, then the still image to be played back.



- Touch ◄▮⏪/⏩▮► during pause to play back movie slowly.
- One touch makes the reverse/fast forward approximately 5 times faster, two touches makes it approximately 10 times* faster.

* approximately 8 times faster using a DVD+RW

- When you touch a movie marked with ▮►▮, you can play it back from the point you have stopped previously.
  When you record another new image, ▮►▮ appears with the image that was recorded last.

To adjust the volume

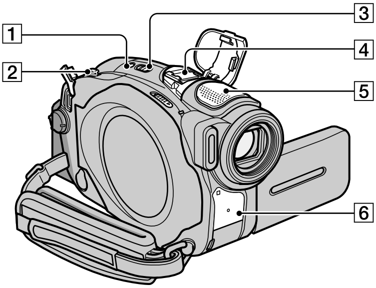
Touch [P-MENU] → [VOLUME], then adjust it with [−]/[+].

- If you cannot find [VOLUME] in [P-MENU], touch [SETUP] (p.52).

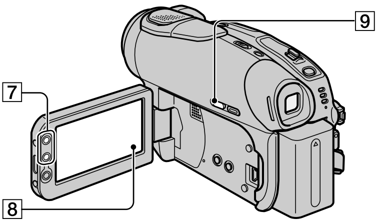
To playback the disc on other DVD devices

See page 44.

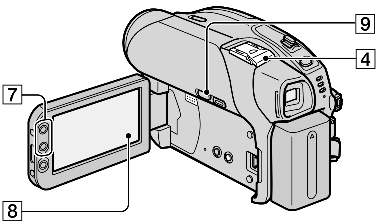
Functions used for recording/playback, etc.



DCR-DVD403E/DVD803E:



Except for DCR-DVD403E/DVD803E:



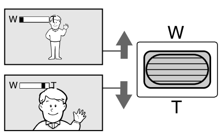
Recording

To use zoom .... [2] [7]

Move the power zoom lever [2] slightly for a slower zoom. Move it further for a faster zoom.

Wider range of view: (Wide)

Close view: (Telephoto)



- Do not remove your finger from the power zoom lever [2], when you operate it. If you do so, the sound of the lever moving may be recorded.
- You cannot change the zoom speed with the zoom buttons [7] alongside of the LCD screen.
- The minimum distance required between your camcorder and the subject to get a sharp focus is about 1cm (about 1/2 inch) for wide angle and about 80cm (about 2 5/8 feet) for telephoto.
- You can set [DIGITAL ZOOM] (p.60) if you want to zoom to a level greater than the following:

	(optical zoom)
DCR-DVD92E/DVD602E/DVD653E	20 ×
DCR-DVD202E/DVD203E/DVD703E	12 ×
DCR-DVD403E/DVD803E	10 ×

To record sound with more presence (5.1ch surround recording)(Except for DCR-DVD92E/DVD602E) .... [4] [5]

Using your camcorder, Dolby Digital 5.1 Creater*, you can record audio in the 5.1ch surround sound** converting audio input in 4ch microphone.
When you playback the disc on playback equipment that supports 5.1ch surround sound, you can enjoy exciting and powerful sound.

DCR-DVD403E/DVD803E

You can record sound with the internal 4ch microphone [5] or by attaching an external microphone (ECM-HQP1)(optional) to the Active Interface Shoe [4].

Except for DCR-DVD403E/DVD803E

You can record sound by attaching an external microphone (ECM-HQP1) (optional) to the Active Interface Shoe [4].
For details of the optional microphone, refer to the instruction manual supplied with your microphone and [EXT SUR MIC] (p.66).

- ♪5.1ch appears while recording or playing back in 5.1ch mode, however the 5.1ch surround sound will be converted to 2ch to be output on your camcorder.

* Dolby Digital 5.1 Creater compresses sound effectively while maintaining high quality sound. It creates Dolby Digital 5.1ch surround sound by using disc spaces effectively. A disc created by Dolby Digital 5.1 Creater can be played back with DVD recorders/DVD players compatible with your discs. If you have a 5.1ch surround system, such as a home theater, you will enjoy more powerful sound.

**The surround speakers output stereo sound from 6 channels, that is, 5ch from front speakers (Left/Right/Center) and rear speakers (Left/Right), and 0.1ch from a sub woofer that covers the deep bass range under 120Hz. The sub woofer channel is counted as 0.1 because of a deep bass. It reproduces 3D sound imaging providing more exciting and powerful sound compared with ordinary stereo sound that produces just left and right sound move.

To use the flash 1 4

Press ϟ (flash) 1 repeatedly to select a setting (DCR-DVD403E/DVD803E).
You can use the optional flash by attaching to the Active Interface Shoe 4 (p.81)
For details, refer to the instruction manual supplied with the flash, and [FLASH SET] (p.58).

No indicator displayed: Automatically flashes when there is insufficient ambient light.
↓
ϟ (Forced flash): Always uses the flash regardless of the surrounding brightness.
↓
Ⓧ No flash: Records without flash.

- The recommended distance to the subject when using the built-in flash is 0.3 to 2.5 m (1 to 8 feet).
- Remove any dust from the surface of the flash lamp before using it. Flash effect may be impaired if heat discoloration or dust obscures the lamp.
- The flash charge lamp flickers when charging the flash, and remains lit when the battery charge is complete.
- If you use the flash in bright places such as when shooting a backlit subject, the flash may not be effective.
- Attaching a conversion lens (optional) may create a shadow.
- You can change the brightness of the flash by setting [FLASH LEVEL], or you can prevent the redeye by setting [REDEYE REDUC] (DCR-DVD403E/DVD803E), or [FLASH MODE] (Except for DCR-DVD403E/DVD803E) (p.58).

To record in dark places (NightShot (DCR-DVD403E/DVD803E)/NightShot plus (Except for DCR-DVD403E/DVD803E)) 3

Set the NIGHTSHOT or NIGHTSHOT PLUS switch 3 to ON. (◉ and ["NIGHTSHOT"] or ["NIGHTSHOT PLUS"] appear.)

- To record an image brighter, use Super NightShot (DCR-DVD403E/DVD803E)/Super NightShot plus (Except for DCR-DVD403E/DVD803E) function (p.59).
  To record an image brighter in dim light, use Color Slow Shutter function (p.59).
- The NightShot/NightShot plus and Super NightShot/Super NightShot plus use infrared light. Therefore, do not cover the infrared port 6 with your fingers or other objects.
- Adjust the focus manually ([FOCUS], p.58) when it is hard to focus automatically.
- Do not use these functions in bright places. This may cause a malfunction.

To adjust the exposure for backlit subjects 9

To adjust the exposure for backlit subjects, press BACK LIGHT 9 to display ☒. To cancel the back light function, press BACK LIGHT again.

To adjust the focus for an off center subject 8

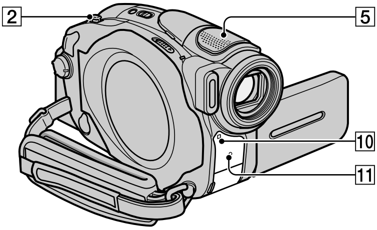
See [SPOT FOCUS] on page 58.

To fix the exposure for the selected subject 8

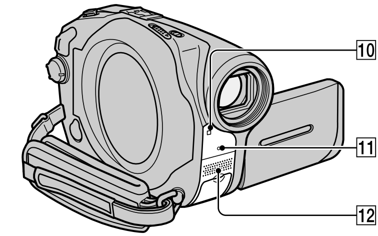
See [SPOT METER] on page 56.

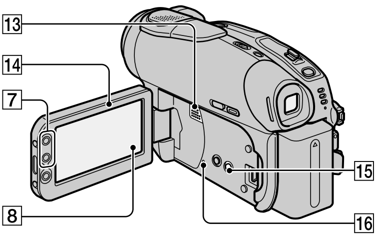
Recording/Playback

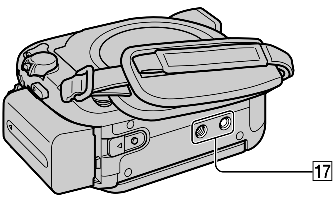
DCR-DVD403E/DVD803E:



Except for DCR-DVD403E/DVD803E:

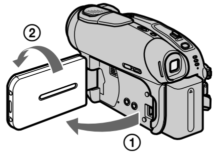






To record in mirror mode .... [14]

Open the LCD screen [14] 90 degrees to the camcorder (①), then rotate it 180 degrees to the lens side (②).



- A mirror-image of the subject appears on the LCD screen, but the picture will be normal when recorded.

To add special effects .... [8]

See PICT. APPLI on page 63.

To use a tripod .... [17]

Attach the tripod (optional: the length of the screw must be less than 5.5 mm) to the tripod receptacle [17] using a tripod screw.

Playback

To play back the images in sequence .... [8]

See [SLIDE SHOW] on page 64.

To use PB ZOOM .... [2] [7]

You can magnify pictures from about 1.1 to 5 times the original size.
Magnification can be adjusted with the power zoom lever [2] or the zoom buttons [7] alongside of the LCD screen.

① Play back the picture you want to magnify.

② Magnify the picture with T (Telephoto). A frame appears on the LCD screen.

③ Touch the portion that you want to display in the center of the LCD screen.

④ Adjust the magnification with W (Wide angle)/T (Telephoto).

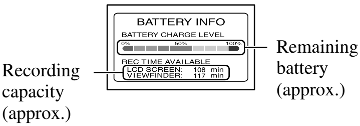
To cancel, touch [END].

- You cannot change the zoom speed with the zoom buttons [7] alongside of the LCD screen.

Recording/playback

To check the remaining battery...... [15]

Set the POWER switch up to OFF (CHG), and then press DISP/BATT INFO [15]. If you press this button once, BATTERY INFO appears on the screen for about 7 seconds. If you keep press and hold the button for a while, this information is displayed for about 20 seconds.



To turn off the operation confirmation beep .... [8]

See [BEEP] (p.68) to set the operation beep.

To initialize the settings .... [16]

Press RESET [16] to initialize all the settings, including settings for date and time. (Setup items customized on Personal Menu are not initialized.)

Other part names and functions

[5] Built-in 4ch microphone (DCR-DVD403E/DVD803E)
When an external microphone (optional) is connected, it takes precedence over the internal microphone (p.81).

[12] Built-in stereo microphone (Except for DCR-DVD403E/DVD803E)
When an external microphone (optional) is connected, it takes precedence over the internal microphone (p.81).

[10] Remote sensor (Except for DCR-DVD92E/DVD602E)
Point the Remote Commander (p.41) towards the remote sensor to operate your camcorder.

[11] Recording lamp
The recording lamp lights up in red during recording (p.68).

[13] Speaker
Sounds come out from the speaker.

- For how to adjust the volume, see page 33.

Checking/Deleting the last scene (Review/Review deleting)

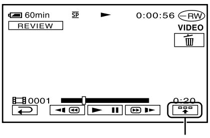
You can check or delete the last recorded scene.
However, you cannot delete it if:
– you have removed the disc.
– you have recorded the new scenes.

Checking the last scene (Review)

1 Slide the POWER switch down to light up the (Movie) or (Still) lamp, then touch .

The playback of the latest scene starts.

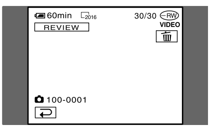
Movie



Touch to display below function buttons.

: Return to the beginning of the viewing movie.
/ :Adjust the volume

Still image



To return to recording

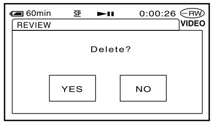
Touch .

- The recording data (DATA CODE) does not appear on the Review screen.
- When reviewing still images recorded continuously, you can forward/backward the images with / .

Deleting the last scene (Review deleting) (DVD-RW/DVD+RW only)

If the checked scene is unnecessary, you can delete it on the spot.
Data once recorded on DVD-Rs cannot be deleted.

1 Press during the review.



2 Touch [YES].

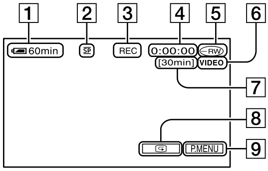
- You cannot recover a scene once you delete it.

- You can only delete the last recorded scene. When is grayed out, you cannot delete the scene due to the following reasons.
  – The last recorded scene has been already deleted.
  – There is a movie or a still image that has been recorded just after the scene being played back.
- When you delete still images that were recorded continuously (p.61), all the images are deleted at same time.
  You can delete a specific still image when you record images on a DVD-RW (VR mode) (p.72).

Indicators displayed during recording/playback

( ) is a reference page.
The indicators during recording will not be recorded.

Recording movies



1 Remaining battery (approx.) (37)

2 Recording mode (HQ or SP or LP) (65)

3 Recording status ([STBY] (standby) or [REC] (recording)

4 Counter (hour: minute: second)

5 Disc type (13)

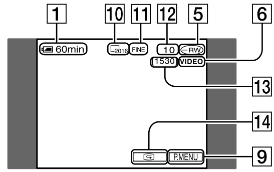
6 Recording format of a DVD-RW (13)

7 Remaining time of the disc (approx.) (68)

8 Review button (38)
Displays the most recently recorded image. Touch [↩] to return to standby.

9 Personal Menu button (52)

Recording still images



10 Image size (Except for DCR-DVD92E/DVD602E/DVD653E) (62)
2016 2016 × 1512 (DCR-DVD403E/DVD803E)
1152 1152 × 864 (DCR-DVD202E/DVD203E/DVD703E), or 640 640 × 480)

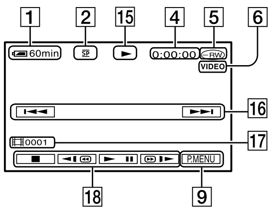
11 Quality ([FINE] or [STD]) (62)

12 The number of recorded still images

13 The number of recordable still image (approx.) (68)

14 Review button (38)
Displays the most recently recorded image. Touch [↩] to return to standby.

Viewing movies



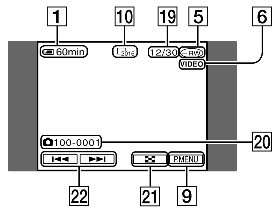
15 Playback mode

16 Previous/Next button (29, 33)

17 Scene number

18 Video operation buttons (29, 33)

Viewing still images



19 Number of played back still images /Total number of recorded still images

20 Data file name

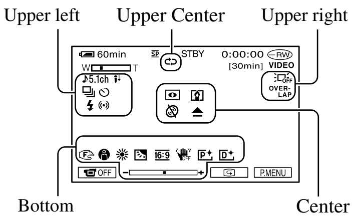
21 VISUAL INDEX button (29, 33)

22 Previous/Next button (29, 33)

( ) is a reference page

Indicators on the LCD screen and viewfinder

When you can change the setup items, or during recording or playback, following indicators displayed.



Upper left

Indicator	Meaning
♪5.1ch	5.1ch surround recording/ playback (34)
	Self-timer recording (59)
BRK	Continuous photo recording /Bracket recording (61)
ϟ+ ϟ–	Flash light (58)
	MICREF LEVEL low (66)
((•))	WIDE STEREO (66)

Upper center

Indicator	Meaning
	Repeat of Slide show (64)

Upper right

Indicator	Meaning
WHITE FADER BLACK FADER OVER-LAP WIPE	Fader (63)
OFF	LCD backlight off (21)

Center

Indicator	Meaning
	NightShot/NightShot plus (35)
S	Super NightShot/Super NightShot plus (59)
	Color Slow Shutter (59)
	Warning (101)

Bottom

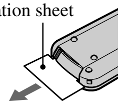
Indicator	Meaning
P	Picture effect (64)
D	Digital effect (63)
F	Manual focus (58)
	PROGRAM AE (56)
	Backlight (35)
	White balance (57)
16:9	WIDE SELECT (26, 60)
OFF	SteadyShot off (61)
– +	Flexible spot meter (56)/ Exposure (57)

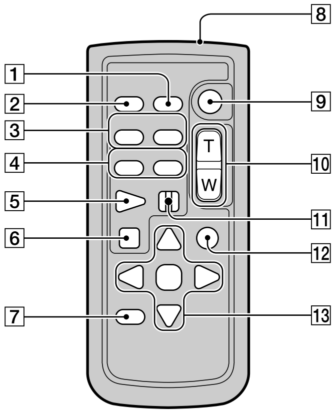
DATA CODE while recording

The recording data (date/time or various settings in effect when recording) is recorded automatically on the disc. They are not displayed while recording. However, you can check them as [DATA CODE] during playback (p.67).

Remote Commander (Except for DCR-DVD92E/DVD602E)

Remove the insulation sheet before using the Remote Commander.





1 DATA CODE (p.67)

2 PHOTO (p.28, 32)
The on-screen image when you press this button will be recorded as a still image.

3 SCAN/SLOW (p.29, 33)

4 ⏮ ⏭ (Previous/Next) (p.29, 33)

5 PLAY (p.29, 33)

6 STOP (p.29, 33)

7 DISPLAY (p.22)

8 Transmitter

9 START/STOP (p.28, 32)

10 Power zoom (p.34, 36)

11 PAUSE (p.29, 33)

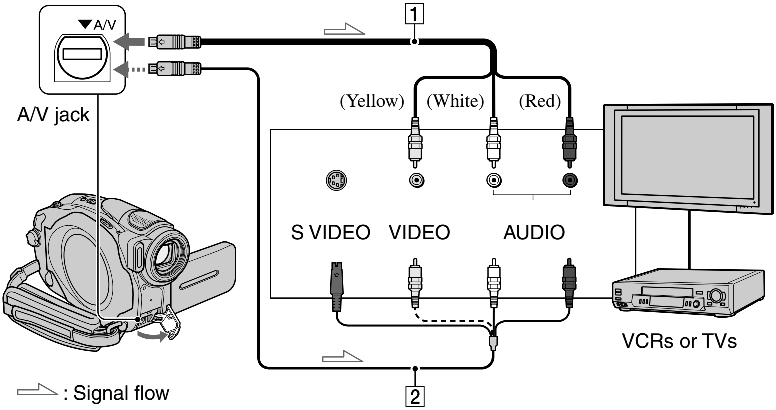
12 VISUAL INDEX (p.29, 33)
Displays a VISUAL INDEX screen when you press this while playing back.

13 ◄/►/▲/▼/ ENTER
When you press any button, an orange frame appears on the LCD screen. Select a desired button or an item with ◄/►/▲/▼, then press ENTER to enter.
When no commands have been sent from the Remote Commander a certain period, the orange frame disappears. When you press any of ◄/►/▲/▼, or ENTER again, the frame appears at the position where it was displayed last.

- Point the Remote Commander towards the remote sensor to operate your camcorder (p.37).
- To change the battery, see page 111.

Playing the picture on a TV

Connect your camcorder to the wall socket using the supplied AC adaptor for this operation (p.17). Refer also to the instruction manuals supplied with the devices to be connected.



1 **A/V connecting cable (supplied)**
Connect to the input jack of the other device.

2 **A/V connecting cable with S VIDEO (optional)**
When connecting to another device via the S VIDEO jack, by using an A/V connecting cable with an S VIDEO cable (optional), higher quality pictures can be produced than with an A/V connecting cable. Connect the white and red plug (left/right audio) and the S VIDEO plug (S VIDEO channel) of the A/V connecting cable with an S VIDEO cable (optional). The yellow plug connection is not necessary.

When your TV is connected to a VCR

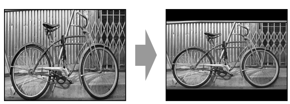
Connect your camcorder to the LINE IN input on the VCR. Set the input selector on the VCR to LINE.

To set the aspect ratio according to the connected TV (16:9/4:3) (DCR-DVD202E/DVD203E/DVD403E/DVD703E/DVD803E)

Change the setting according to the screen size of the TV you will view pictures on.

① Slide the POWER switch down to light up the ▶ (Play/Edit) lamp.
② Touch P-MENU → [SETUP] → STANDARD SET → [TV TYPE] → [16:9] or [4:3] → OK.

- When you set [TV TYPE] to [4:3], the image quality may deteriorate. Also, when the recorded picture's aspect ratio switches between 16:9 and 4:3, the image may jitter.
- When you play back a picture recorded in 16:9 aspect ratio on a 4:3 TV not compatible with the 16:9 signal, set [TV TYPE] to [4:3].



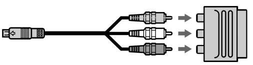
When your TV is monaural (When your TV has only one audio input jack)

Connect the yellow plug of the A/V connecting cable to the video input jack and connect the white (left channel) or the red (right channel) plug to the audio input jack of your TV or VCR.

- You can display the counter on the TV screen by setting [DISP OUTPUT] to [V-OUT/PANEL] (p.68).

If your TV/VCR has a 21-pin adaptor (EUROCONNECTOR)

Use a 21-pin adaptor (optional) to view playback picture.



Making the disc compatible with playback on DVD players or DVD drives (Finalizing)

Finalizing allows the recorded disc to be played back on other DVD players (DVD player/ DVD recorder etc.,) or the DVD-drive on your computer. The finalizing procedure differs depending on the disc type.

- **Playback compatibility is not guaranteed with all players.**

DVD -R 8cm	Finalizing is required.
	The disc cannot be overwritten once you finalize it even when there is space to record.
DVD -RW 8cm VIDEO mode	Finalizing is required.
	After finalizing, the disc can be overwritten on your camcorder when you unfinalize it (p.50). You need to finalize it again when you play it back on other DVD players.
DVD -RW 8cm VR mode	Finalizing is required. Once you finalize the disc, you can play it back on DVD players that support the VR mode.
	After finalizing, you can also record additional material at any time. You do not need to finalize the disc again after additional recording.
DVD +RW 8cm	You can play back the disc on DVD players without finalizing it. However, you need to finalize the disc in the following cases: – when you want to create a DVD menu (p.45). – when you want to create a Photomovie (p.46). – when you want to play back images on a DVD drive of a computer. – when recording time is the following: HQ mode: less than 5 minutes SP mode: less than 8 minutes LP mode: less than 15 minutes
	When you create a DVD menu/Photomovie, a confirmation dialog appears when you record additional material. Then, the DVD menu/Photomovie are deleted. You must finalize the disc again when you want to create a DVD menu/Photomovie after recording additional material on the disc.

Steps for finalizing

Follow the steps below.

- **It takes from a minute to a few hours for finalizing. The shorter the amount of material recorded on the disc, the longer it takes for finalizing.**
- **Use an AC Adaptor as the power source to prevent your camcorder from running out of power during finalizing.**
- When you finalize a double-sided disc, you must finalize each side of the disc.

Step 1: Preparing for finalizing (p.45)

Step 2: Customizing a DVD menu* (p.45)

If you have set the DVD menu setting, you can create a menu screen to view the thumbnails as a list when the disc is played back on DVD devices.

Step 3: Customizing a Photomovie* (p.46)

If you have set the Photomovie setting, you can create a Photomovie to view still images on other DVD devices.

Step 4: Changing the disc title (p.46)

You can make a title on each disc. As the default, the date when the disc was first used is added as a disc title.

Step 5: Finalizing a disc (p.47)

* You cannot follow using a DVD-RW (VR mode).

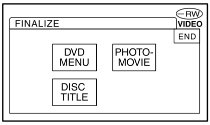
Step 1: Preparing for finalizing

1 Place your camcorder in a stable position. Connect the AC Adaptor to the DC IN jack on your camcorder.

2 Turn on the power by sliding the POWER switch down.

3 Insert the disc to be finalized.

4 Touch P-MENU → [FINALIZE]→ [SET].



Step 2: Customizing a DVD menu

What is a DVD menu?

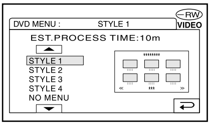
A DVD menu is a menu screen that allows you to display the index to check the contents of the disc or to select desired scenes easily. When you create the DVD menu on your camcorder, the first scene of each movies is displayed with date as a thumbnail.

- You cannot create a DVD menu using a DVD-RW (VR mode).

1 Touch [DVD MENU].

Playback on DVD devices

2 **Select the desired one from 4 types of pattern with [▲]/[▼].**



Select [NO MENU] if you do not create a DVD menu.

3 **Touch [OK].**

Step 3: Customizing a Photomovie

What is a Photomovie ?

A Photomovie involves converting still images in JPEG format to movies in MPEG format to play them back on other DVD players or on your computer. The original still image remains in the JPEG format on the disc.
Converted still images are played back in sequence like a slide show. The resolution (pixels) of the converted Photomovie, however, is lower than that of the original still images.

- It may take more time for finalizing when you create a Photomovie since the more still images recorded on the disc, the more time it takes to create a Photomovie.
- You can view still images in the JPEG format using the DVD drive on your computer without creating a Photomovie (p.48).
- You cannot create a Photomovie on a DVD-RW (VR mode) in this step. Customize it on the EDIT screen (p.76).

1 **Touch [PHOTOMOVIE].**

2 **Touch [YES].**

Select [NO] if you do not create a Photomovie.

3 **Touch [OK].**

Step 4: Changing the disc title

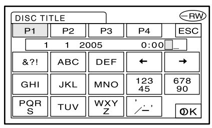
Skip to "Step 5: Finalizing a disc (p.47)" if you do not change the disc title.

1 **Touch [DISC TITLE].**

2 **Delete unnecessary characters by touching [←].**

The yellow cursor moves and characters are deleted from the end.

3 **Select the type of a character, then touch the desired character.**



To erase a character: Touch [←].
To insert a space: Touch [→].

4 **Touch [→] as you register a character to move to the next entry point.**

- Up to 20 characters can be registered.

5 When you have finished entering characters, touch [OK] .

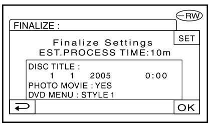
The disc title changes to the one you entered.

6 Touch [END].

- When you change a disc title already set by other devices, the 21st and subsequent characters are deleted.

Step 5: Finalizing a disc

1 Confirm the settings you made in steps from 2 to 4 of the "steps for finalizing" on the LCD screen.



2 Touch [OK].

3 Touch [YES] → [YES].

Finalizing starts.

- Do not apply shock or vibration to your camcorder, and do not disconnect the AC adaptor during finalizing.
  When you need to disconnect the AC adaptor, make sure that the power of your camcorder is set to off and disconnect the adaptor after the CHG (charge) lamp goes off. Finalizing restarts when you connect the AC adaptor and turn on your camcorder again.
  You cannot remove the disc until the finalizing operation is completed.

4 Touch [OK],when [Completed] appears.

When using a DVD-R/DVD-RW (VIDEO mode)/DVD+RW, ⏏ flashes after finalizing is completed when the POWER switch is set to (Movie) or (Still). Remove the disc from your camcorder.

- When you made the setting to enable a creation of a DVD menu on DVD-R/DVD-RW (VIDEO mode)/DVD+RW, then finalize the disc, the DVD menu appears for a few seconds while finalizing the disc.
- You cannot view a Photomovie with the DVD-R/DVD-RW (VIDEO mode) discs on your camcorder.
- After finalizing a disc, the disc indicator and the recording format are displayed as shown below:

DVD-R	−R
DVD-RW (VIDEO mode)	−RW VIDEO
DVD-RW (VR mode)	−RW VR
DVD+RW	+RW

Playing back a disc on DVD players, etc.

- **Do not use the 8cm CD adaptor with an 8cm DVD as it may cause a malfunction.**
- **Make sure that a vertically installed DVD device is placed in the position where a disc can be placed horizontally.**

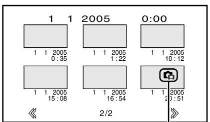
1 Insert a disc into the DVD devices.

2 Play back the disc.

The play back procedure varies depending on the DVD device. For details, refer to the instruction manual supplied with your DVD device.

If you have created a DVD menu (DVD-R/DVD-RW:VIDEO mode/ DVD+RW)

You can select the desired scene in the menu.
A photomovie is listed after all the movies in the menu.



Photomovie

- The disc cannot be played back, freezes for an instant between the scenes, or some functions may be disabled on some DVD devices.
- Still images are played back as a Photomovie swapping images in every 3 seconds.

Playing back a disc on a computer with a DVD drive installed

- **Do not use the 8cm CD adaptor with an 8cm DVD as it may cause a malfunction.**
- **Even when you are using a DVD+RW, you must finalize the disc. Otherwise, it may cause a malfunction.**

Playing back movies

Use a DVD drive that supports 8cm discs, and a DVD playback application must have been installed on your computer.

1 Insert the finalized disc into the DVD drive of your computer.

2 Play back the disc using a DVD playback application.

- The disc may not be played back on some computers. For details, refer to the instruction manuals of your computer.
- You cannot play back or edit movies that have been copied from the disc to the hard disk of your computer. For details on how to import movies, refer to the "First Step Guide" supplied with the CD-ROM (Except for DCR-DVD92E/ DVD202E/DVD602E).

Playing back still images

Still images stored on the disc are displayed in the JPEG format.
Note that erasing or changing the original data may occur accidentally in this operation since you use the original data on the disc.

1 Insert the finalized disc into the DVD drive of your computer.

2 Click [Start] → [My Computer].

Or, double-click the [My Computer] icon on the desktop.

3 Right-click the DVD drive with the disc inserted, then click [Open].

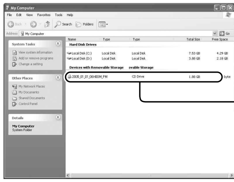
4 Double-click [DCIM] → [100MSDCF].

5 Double-click the file to be displayed.

The selected still image appears on the screen.

The date the disc was first used is recorded on the volume label of the disc.

<e.g.>
When the disc was first used at 6:00 pm on January 1st 2005:
2005_01_01_06H00M_PM



Images are stored in the following folders on the disc.

■Movies

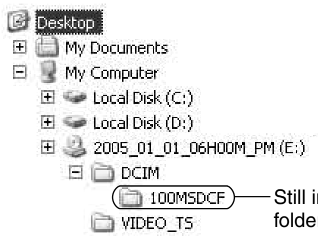
DVD-R/DVD-RW(VIDEO mode)/DVD+RW:
VIDEO_TS folder

DVD-RW (VR mode):
DVD_RTAV folder

■Still images

DCIM\100MSDCF folder

<e.g.>
The folder for data for DVD-Rs/DVD-RWs (VIDEO mode)/DVD+RWs
When using Windows XP:



Recording additional scenes after finalizing

You can record additional material on the finalized DVD-RWs (VIDEO mode)/ DVD+RWs by following the steps below if there is space to record on the disc.
When using the finalized DVD-RW (VR mode) disc, you can record additional material on the disc without any additional steps.

- Use an AC Adaptor as power source to prevent your camcorder from running out of power during operation.
- Do not apply shock or vibration to your camcorder, and do not disconnect the AC adaptor during operation.
- A DVD menu and a Photomovie created during finalizing are deleted.
- When you use a double-sided disc, following procedures are required on each side.

When using a DVD-RW (VIDEO mode) disc (Unfinalizing)

1 Connect the AC Adaptor to the DC IN jack on your camcorder, then connect the mains lead to the wall socket.

2 Turn on the power by sliding the POWER switch down.

3 Insert the finalized disc into your camcorder.

4 Touch P-MENU → [SETUP].

5 Touch DISC SET → [UNFINALIZE].

6 Touch [YES] → [YES], then touch OK when [Completed.] appears.

When using a DVD+RW

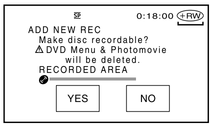
If you have created a Photomovie or a DVD menu in finalizing (p.44), the following steps are required.

1 Connect the AC Adaptor to the DC IN jack on your camcorder, then connect the mains lead to the wall socket.

2 Slide the POWER switch down to light up the (Movie) or (Still) lamp.

3 Insert the finalized disc into your camcorder.

A confirmation dialog asking if you record additional scenes appears.



4 Touch [YES] → [YES].

[Completed.] appears, then the screen returns to the recording screen.

Deleting all of the scenes on the disc (Formatting)

Formatting makes the recorded disc new and reusable by deleting all the data recorded on the disc. The recording capacity of the disc is recovered by formatting it.
The procedure for formatting differs depending on the disc type.

DVD -R 8cm	You cannot format this kind of disc. Use a new disc.
DVD -RW 8cm VIDEO mode	You can format this kind of disc and reuse it.
	If you have finalized the disc, it is unfinalized.
DVD -RW 8cm VR mode	You can format this kind of disc and reuse it.
	If you have finalized the disc, the previous records on finalizing remain on the disc.
DVD +RW 8cm	You can format this kind of disc and reuse it.
	If you have finalized the disc, the previous records on finalizing remain on the disc.

- Use an AC adaptor as power source to prevent your camcorder from running out of power during formatting.
- Do not apply shock or vibration to your camcorder, and do not disconnect the AC adaptor during formatting.
- When you use a double-sided disc, formatting is required on each side.

1 Connect the AC Adaptor to the DC IN jack on your camcorder, then connect the mains lead to the wall socket.

2 Turn on the power by sliding the POWER switch down.

3 Insert the disc to be formatted into your camcorder.

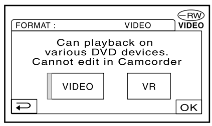
4 Touch [P-MENU] → [FORMAT].

■DVD-RW
Select the recording format, then format the disc. Proceed to step **5**.

■DVD+RW
The [FORMAT] screen appears. Proceed to step **6**.

5 Select the recording format for a DVD-RW, then touch [OK].

For details on a recording format, see page 13.



6 Touch [YES] → [YES], then touch [OK] when [Completed.] appears.

- During the Easy Handycam operation (p.27), the screen in step **5** does not appear even if you insert a DVD-RW in your camcorder. Proceed to step **6**.
- You cannot format a disc that has been protected on other equipments. Cancel the protection with the original equipment, and then format it.

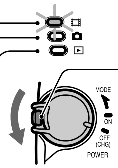
Using the Setup items

1 Slide the POWER switch down to light up the respective lamp.

🎞 : Settings for movies

📷 : Settings for still images

▶ : Settings for viewing/editing



Slide the POWER switch while pressing the green button in the center only when the POWER switch is in the OFF (CHG) position.

2 Touch the LCD screen to select the setup item.

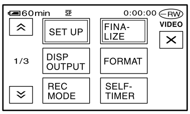
Unavailable items will be grayed out.

■ To use the short-cuts of Personal Menu

On Personal Menu, short-cuts for frequently used setup items are added.

- You can customize Personal Menu as you like (p.70).

① Touch [P-MENU].

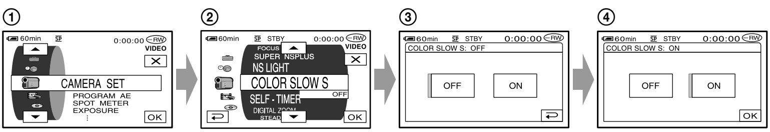


② Touch the desired setup item.
If the desired setup item is not displayed on the screen, touch [⌃]/[⌄] until it is displayed.

③ Select the desired setting, then touch [OK].

■ To use setup items

You can customize setup items that are not added to Personal Menu.



① Touch [P-MENU] → [SETUP].

② Select the desired setup item.
Touch [▲]/[▼] to select the item, then touch [OK]. (The process in step ③ is the same as that in step ②.)

③ Select the desired item.

• You can also touch the item directly to select it.

④ Customize the item.
After finishing the settings, touch [OK]→[X] (close) to hide the setup screen.
If you decide not to change the setting, touch [↩] to return to the previous screen.

• During EASY Handycam operation (p.27), available setup items are displayed when you touch [SETUP] on the LCD screen.

Setup items

Available setup items (●) vary depending on the position of a lamp.
*These functions are available during Easy Handycam operation.

Position of lamp:	Movie	Still	Play/Edit
CAMERA SET (p.56)			
PROGRAM AE	●	●	–
SPOT METER	●	●	–
EXPOSURE	●	●	–
WHITE BAL.	●	●	–
AUTO SHUTTER	●	–	–
SPOT FOCUS	●	●	–
FOCUS	●	●	–
FLASH SET	–	●	–
SUPER NS/SUPER NSPLUS	●	–	–
NS LIGHT	●	●	–
COLOR SLOW S	●	–	–
SELF-TIMER	●	●	–
DIGITAL ZOOM	●	–	–
WIDE SELECT [1]	●	–	–
STEADYSHOT	●	–	–
STILL SET (p.61)			
BURST [2]	–	●	–
QUALITY	–	●	–
IMAGE SIZE [2]	–	●	–
FILE NO.	–	●	–
PICT.APPLI. (p.63)			
FADER	●	–	–
D. EFFECT	●	–	–
PICT. EFFECT	●	–	–
REC CTRL [3]	–	–	●
SLIDE SHOW	–	–	●
DEMO MODE	●	–	–

Position of lamp:	Movie	Still	Play/Edit

DISC SET (p.65)

	Movie	Still	Play/Edit
FORMAT*	●	●	●
FINALIZE*	●	●	●
UNFINALIZE	●	●	●
DISC TITLE	●	●	●

STANDARD SET (p.65)

	Movie	Still	Play/Edit
REC MODE	●	–	–
VOLUME*	–	–	●
MULTI-SOUND	–	–	●
MICREF LEVEL	●	–	–
SUR MONITOR [4]	●	–	–
EXT SUR MIC	●	–	–
LCD/VF SET	●	●	●
TV TYPE [2]	●	●	●
USB SPEED [3]	–	–	●
DATA CODE	–	–	●
DISC REMAIN	●	●	–
REMOTE CTRL [4]	●	●	●
REC LAMP	●	●	–
BEEP*	●	●	●
DISP OUTPUT	●	●	●
SETUP ROTATE	●	●	●
A.SHUT OFF	●	●	●
CALIBRATION	–	–	●

TIME/LANGU. (p.69)

	Movie	Still	Play/Edit
CLOCK SET*	●	●	●
AREA SET	●	●	●
SUMMERTIME	●	●	●
LANGUAGE*	●	●	●

[1] DCR-DVD92E/DVD602E/DVD653E

[2] DCR-DVD202E/DVD203E/DVD403E/DVD703E/DVD803E

[3] Except for DCR-DVD92E/DVD202E/DVD602E

[4] Except for DCR-DVD92E/DVD602E

CAMERA SET

Settings to adjust your camcorder to the recording conditions (EXPOSURE/WHITE BAL./ STEADYSHOT, etc.)

The default settings are marked with ▶. The indicators in parentheses appear when the items are selected.
See page 52 for details on selecting setup items.

PROGRAM AE

You can record pictures effectively in various situations with the PROGRAM AE function.

▶AUTO

Select to automatically record pictures effectively without the [PROGRAM AE] function.

SPOTLIGHT*()



Select to prevent people's faces from appearing excessively white when subjects are lit by strong light.

PORTRAIT (Soft portrait) ()



Select to bring out the subject such as people or flowers while creating a soft background.

SPORTS* (Sports lesson) ()



Select to minimize shake when shooting fast moving subjects.

BEACH&SKI*()



Select to prevent people's faces from appearing dark in strong light or reflected light, such as at a beach in midsummer or on a ski slope.

SUNSET&MOON**()



Select to maintain the atmosphere of situations such as sunsets, general night views or fireworks.

LANDSCAPE**()

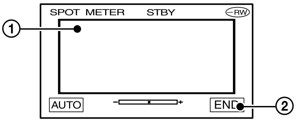


Select to shoot distant subjects clearly. This setting also prevents your camcorder from focusing on glass or metal mesh in windows that comes in between the camcorder and the subject.

- Items with one asterisk (*) can be adjusted so as not to focus on subjects only a short distance away. Items with two asterisks (**) can be adjusted to focus on subjects farther away.
- The setting returns to [AUTO] when you have the power source disconnected from your camcorder for more than 5 minutes.

SPOT METER (Flexible spot meter)

You can adjust and fix the exposure to the subject, so that it is recorded in suitable brightness even when there is strong contrast between the subject and the background, such as subjects in the spotlight on stage.



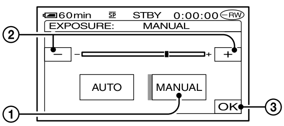
① Touch the point where you want to fix and adjust the exposure on the screen.
-▭+ appears.
② Touch [END].

To return the setting to automatic exposure, touch [AUTO]→[END].

- If you set [SPOT METER], [EXPOSURE] is automatically set to [MANUAL].
- The setting returns to [AUTO] when you have the power source disconnected from your camcorder for more than 5 minutes.

EXPOSURE

You can fix the brightness of a picture manually. When recording indoors on a clear day, for instance, you can avoid backlight shadows on people next to the window by fixing the exposure to that of the wall side of the room.



① Touch [MANUAL].
-▭+ appears.
② Adjust the exposure by touching [–]/[+].
③ Touch [OK].

To return the setting to automatic exposure, touch [AUTO]→ [OK].

- The setting returns to [AUTO] when you have the power source disconnected from your camcorder for more than 5 minutes.

WHITE BAL. (White balance)

You can adjust the color balance to the brightness of the recording environment.

▶AUTO

The white balance is adjusted automatically.

OUTDOOR (☀)

The white balance is set to the brightness of the outdoor environment or daylight under fluorescent lamps.

INDOOR (☼)

The white balance is set to the brightness of warm white fluorescent lamps.

ONE PUSH (⊿■⊿)

The white balance will be adjusted according to the ambient light.

① Touch [ONE PUSH].
② Frame a white object such as a piece of paper, to fill the screen under the same lighting conditions as you will shoot the subject.
③ Touch [⊿■⊿].
⊿■⊿ flashes quickly. When the white balance has been adjusted and stored in the memory, the indicator stops flashing.

- Do not shake your camcorder while ⊿■⊿ is flashing quickly.
- ⊿■⊿ flashes slowly if white balance could not be set.
- If ⊿■⊿ keeps flashing even after you have touched [OK], set [WHITE BAL.] to [AUTO].

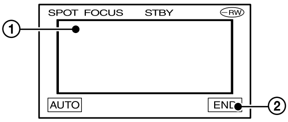
- When you have changed the battery pack while [AUTO] is selected, or you bring your camcorder outdoors from inside the house while using fixed exposure, select [AUTO] and aim your camcorder at a nearby white object for about 10 seconds for better color balance adjustment.
- Redo the [ONE PUSH] procedure if you change the [PROGRAM AE] settings, or bring your camcorder outdoors from inside the house, or vice versa during the [ONE PUSH] is set to on.
- Set [WHITE BAL.] to [AUTO] or [ONE PUSH] under white or cool white fluorescent lamps.
- The setting returns to [AUTO] when you have the power source disconnected from your camcorder for more than 5 minutes.

AUTO SHUTTER

Automatically activates the electronic shutter to adjust the shutter speed when recording in bright conditions if you set it to [ON] (the default setting).

SPOT FOCUS

You can select and adjust the focal point to aim it at a subject not located in the center of the screen.



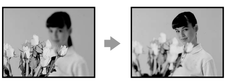
① Touch the subject on the screen.
appears.
② Touch [END].

To adjust the focus automatically, touch [AUTO]→[END].

- If you set [SPOT FOCUS], [FOCUS] is automatically set to [MANUAL].
- The setting returns to [AUTO] when you have the power source disconnected from your camcorder for more than 5 minutes.

FOCUS

You can adjust the focus manually. Select this when you want to focus on a certain subject intentionally.



① Touch [MANUAL].
appears.
② Touch (focusing on close subjects)/ (focusing on distant subjects) to sharpen the focus. appears when the focus cannot be adjusted any closer, and appears when the focus cannot be adjusted farther away.
③ Touch [OK].

To adjust the focus automatically, touch [AUTO]→[OK] in step ②.

- It is easier to focus on the subject by moving the power zoom lever towards T (telephoto) to adjust the focus, then towards W (wide angle) to adjust the zoom for recording. When you want to record a subject at close range, move the power zoom lever to W (wide angle), then adjust the focus.
- The minimum distance required between your camcorder and the subject to get a sharp focus is about 1 cm (about 1/2 inch) for wide angle and about 80 cm (about 2 5/8 feet) for telephoto.
- The setting returns to [AUTO] when you have the power source disconnected from your camcorder for more than 5 minutes.

FLASH SET

You can set this function when you use the built-in flash (DCR-DVD403E/DVD803E) or an external flash (optional) that is compatible with your camcorder.

FLASH MODE (Except for DCR-DVD403E/DVD803E)

▶ON
Flashes every time.

ON ⊙
Flashes to reduce the red-eye phenomenon.

AUTO
Flashes automatically.

AUTO ⊙
Flashes automatically to reduce the red-eye phenomenon.

- If the flash is not capable of preventing the red-eye phenomenon, you can select only [ON] or [AUTO].
- The setting returns to [ON] when you have the power source disconnected from your camcorder for more than 5 minutes.

FLASH LEVEL

HIGH (⚡+)
Makes the flash level higher.

▶NORMAL (ϟ)

LOW(ϟ–)

Makes the flash level lower.

- The setting returns to [NORMAL] when you disconnect the power source from your camcorder for more than 5 minutes.

REDEYE REDUC (DCR-DVD403E/ DVD803E)

You can prevent redeye by activating the flash before recording.
Set [REDEYE REDUC] to [ON], then press ϟ (flash) (p.35) repeatedly to select a setting.

◉ (Auto redeye reduction): Pre-flashes to reduce redeye before the flash automatically flashes when there is insufficient ambient light.
↓
◉ϟ (Forced redeye reduction): Always uses the flash and the redeye reducing pre-flash.
↓
Ⓢ (No flash): Records without flash.

- The redeye reduction may not produce the desired effect due to individual differences and other conditions.
- The setting returns to [OFF] when you have the power source disconnected from your camcorder for more than 5 minutes.

SUPER NS (DCR-DVD403E/ DVD803E)/SUPER NSPLUS (Except for DCR-DVD403E/DVD803E) (Super NightShot/Super NightShot plus)

The picture will be recorded at a maximum of 16 times the sensitivity of NightShot/ NightShot plus (p.35) recording if you set [SUPER NS] or [SUPER NSPLUS] to [ON] while the NIGHTSHOT or NIGHTSHOT PLUS switch (p.35) is also set to ON.
S◉ and [“SUPER NIGHTSHOT”] or [“SUPER NIGHTSHOT PLUS”] flash on the screen.

To cancel the setting, set the [SUPER NS] or [SUPER NSPLUS] to [OFF].

- Do not use NightShot/NightShot Plus and [SUPER NS] or [SUPER NSPLUS] in bright places. This may cause a malfunction.
- Do not cover the infrared port with your fingers or other objects.
- Adjust the focus manually ([FOCUS], p.58) when it is hard to focus automatically.
- The shutter speed of your camcorder changes depending on the brightness. The motion of the picture may slow down at this time.

NS LIGHT (NightShot Light)

When using either the NightShot/NightShot plus (p.35) or [SUPER NS] or [SUPER NSPLUS] (p.59) function to record, you can record clearer pictures by setting [NS LIGHT], which emits infrared light (invisible), to [ON] (the default setting).

- Do not cover the infrared port with your fingers or other objects.
- The maximum shooting distance using [NS LIGHT] is about 3 m (10 feet). If you record subjects in dark places, such as night scenes or in moonlight, set [NS LIGHT] to [OFF]. You can make the image color deeper this way.

COLOR SLOW S (Color Slow Shutter)

When you set [COLOR SLOW S] to [ON], you can record an image brighter in color even in dark places.
[◙] and [COLOR SLOW SHUTTER] flash on the screen.

To cancel [COLOR SLOW S], touch [OFF].

- Adjust the focus manually ([FOCUS], p.58) when it is hard to focus automatically.
- The shutter speed of your camcorder changes depending on the brightness. The motion of the picture may slow down at this time.

SELF-TIMER

The self-timer starts recording after about 10 seconds.

① Touch [P-MENU] → [SETUP] → CAMERA SET → [SELF-TIMER] → [ON] → [OK].
 appears.
② Press REC START/STOP to record movies, or PHOTO to record still images.
To cancel the count down, touch [RESET].

To cancel the self-timer, select [OFF] in step ①.

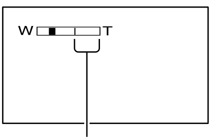
- You can also use the self-timer with the Remote Commander (Except for DCR-DVD92E/DVD602E, p.41).

DIGITAL ZOOM

You can select the maximum zoom level in case you want to zoom greater than optical zoom magnification listed as below:

	(optical zoom)
DCR-DVD92E/DVD602E/DVD653E	20 ×
DCR-DVD202E/DVD203E/DVD703E	12 ×
DCR-DVD403E/DVD803E	10 ×

While recording on a disc. Note that the image quality decreases when you are using the digital zoom.



The right side of the bar shows the digital zooming factor. The zooming zone appears when you select the zooming level.

For DCR-DVD92E/DVD602E/DVD653E

▶OFF
Up to 20 × zoom is performed optically.

40 ×
Up to 20 × zoom is performed optically, and after that up to 40 × zoom is performed digitally.

800 ×
Up to 20 × zoom is performed optically, and after that, up to 800 × zoom is performed digitally.

For DCR-DVD202E/DVD203E/DVD703E

▶OFF
Up to 12 × zoom is performed optically.

24 ×
Up to 12 × zoom is performed optically, and after that up to 24 × zoom is performed digitally.

480 ×
Up to 12 × zoom is performed optically, and after that, up to 480 × zoom is performed digitally.

For DCR-DVD403E/DVD803E

▶OFF
Up to 10 × zoom is performed optically.

20 ×
Up to 10 × zoom is performed optically, and after that up to 20 × zoom is performed digitally.

120 ×
Up to 10 × zoom is performed optically, and after that, up to 120 × zoom is performed digitally.

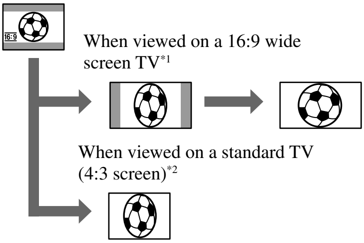
WIDE SELECT (DCR-DVD92E/DVD602E/DVD653E)

You can record a picture in a ratio suitable for the screen on which it will be displayed.

▶4:3
Standard setting (to record pictures to be played back on a 4:3 TV).

16:9 WIDE
Records pictures to be played back on a 16:9 wide TV in full screen mode.

When viewed on the LCD screen/viewfinder with [16:9 WIDE] selected.



*1 When 16:9 screen TV switches to full screen mode, the picture appears on the TV screen at the right ratio.

*2 When you play back in TV (4:3 screen), the picture may be compressed. When you play back in the wide mode, the picture appears as you see it on the LCD screen or in the viewfinder.

- You cannot change the aspect ratio in the following cases:
  - while recording movie
  - when [D.EFFECT] is set to [OLD MOVIE] (p.64).
- When recording on a DVD-R/DVD-RW (VIDEO mode)/DVD+RW, the available recording time may get shorter in the following conditions.
  - when you changed record pictures between 16:9 WIDE and 4:3.
  - when you change the [REC MODE] during 4:3 (p.65).

To play back images on a DVD player or a DVD recorder, the way you see pictures on the TV screen may differ depending on your player. For details, refer to the instruction manuals supplied with the devices you are using.

- When you play back pictures recorded in WIDE on a DVD+RW with a DVD player or a DVD recorder, they may appear to be compressed in the lengthwise direction.

STEADYSHOT

You can record pictures using [STEADYSHOT] (the default setting is [ON]). Set [STEADYSHOT] to [OFF] (OFF) when using a tripod or the conversion lens (optional).

STILL SET

Settings for still images (BURST/QUALITY/IMAGE SIZE, etc.)

The default settings are marked with ▶.
The indicators in parentheses appear when the items are selected.
See page 52 for details on selecting setup items.

BURST (DCR-DVD202E/DVD203E/DVD403E/DVD703E/DVD803E)

You can record several still images one after another by pressing PHOTO.

▶OFF

Select this when not recording continuously.

NORMAL ( )

Record still images continuously at approximately 0.5 seconds intervals. The numbers of the maximum recordable images are as follows;

DCR-DVD202E/DVD203E/DVD703E
1152 × 864 1152 : 4 images
640 × 480 640 : 13 images
DCR-DVD403E/DVD803E
2016 × 1512 2016 : 3 images
640 × 480 640 : 21 images

EXP. BRKTG (BRK)

Records 3 images consecutively with different exposures at approximately 0.5 second intervals. You can compare the 3 images and select an image recorded at the best exposure.

- The flash will not function during continuous recording.
- The maximum number of images will be recorded in the self-timer mode or when you are operating with the Remote Commander.
- You may not be able to record continuous images up to the maximum number depending on the image size and the remaining capacity of the disc.
- It takes longer to record continuous images to the disc compared to normal recording. Record the next still image after the scroll bar indicator ( ) and the ACCESS lamp turns off.

QUALITY

▶**FINE** (FINE)

Records still images at the fine image quality level.

STANDARD (STD)

Records still images at the standard image quality level.

The size of still images (KB)

	2016× 1512* (2016)	1152× 864** (1152)	640× 480 (640)
FINE (FINE)	approx. 1540	approx. 960	approx. 150
STANDARD (STD)	approx. 640	approx. 420	approx. 60

* DCR-DVD403E/DVD803E

** DCR-DVD202E/DVD203E/DVD703E

IMAGE SIZE (DCR-DVD202E/ DVD203E/DVD403E/DVD703E/ DVD803E)

▶ **2016×1512 (2016) (DCR-DVD403E/DVD803E)/ 1152 × 864 (1152) (DCR-DVD202E/DVD203E/DVD703E)**

Records still images clearly.

640 × 480 (640)

Allows for the maximum number of images to be recorded.

Number of still images recordable on a disc (approx.)

	2016× 1512* (2016)	1152× 864** (1152)	640× 480 (640)
DVD-R	810 1750	2150 4100	5100 8100
DVD-RW (VIDEO mode)	850 1850	2250 4300	5400 8600
DVD-RW (VR mode)	850 1850	2250 4300	5400 8600
DVD+RW	740 1450	1650 2600	2950 3800

Top:[FINE] / Bottom:[STANDARD]

*DCR-DVD403E/DVD803E

**DCR-DVD202E/DVD203E/DVD703E

- The table shows approximate recordable number and the above numbers apply to a single-sided disc, and it will be doubled for a double-sided disc.

FILE NO.

▶**SERIES**

Assigns numbers to files in sequence even if the disc is changed.

RESET

Resets the file numbering to 0001 each time the disc is changed.

PICT.APPLI.

Special effects on pictures or additional functions on recording/ playback (PICT.EFFECT/D.EFFECT/SLIDE SHOW, etc.)

The default settings are marked with ▶.
The indicators in parentheses appear when the items are selected.
See page 52 for details on selecting setup items.

FADER

You can add the following effects to currently recording pictures.

① Select the desired effect, then touch [OK].
When you select [OVERLAP] or [WIPE], the image is stored as a still image. (While storing the image, the screen turns to blue.)

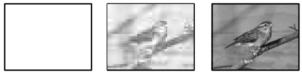
② Press REC START/STOP.
The fader indicator stops flashing and disappears when the fade is complete.

To cancel the operation, touch [OFF] in step ①.



Fading out Fading in

WHITE FADER



BLACK FADER



OVERLAP (fade in only)



WIPE (fade in only)



Using the viewfinder

You can adjust [EXPOSURE] and [FADER] while using the viewfinder by having the LCD screen rotated 180 degrees and closed with the screen facing out.

① Make sure the (Movie) lamp lights up.

② Extend the viewfinder, and close the LCD screen with the screen facing out.
OFF appears.

③ Touch OFF.
[Set LCD off?] appears on the screen.

④ Touch [YES].
The LCD screen is turned off.

⑤ Touch the LCD screen while checking the display in the viewfinder.
[EXPOSURE], etc. are displayed.

⑥ Touch the button you want to set.
[EXPOSURE] : Adjust with [–]/[+], and touch [OK].
[FADER] : Touch it repeatedly to select a desired effect.
ON : The LCD screen lights up.

To hide the buttons, touch [OK].

D.EFFECT (Digital effect)

You can add digital effects to your recordings. D✦ appears.

① Touch the desired effect.

② When you select [LUMI. KEY], adjust the effect with [–]/[+], then touch [OK].
The image displayed when you touch [OK] is saved as a still image.

③ Touch [OK].
D✦ appears.

To cancel [D. EFFECT], touch [OFF] in step ①.

LUMI. KEY (luminance key)

Replaces a brighter area in a previously recorded still image (e.g. a person) with a movie.



OLD MOVIE
Adds an old movie effect to pictures.
The scene is recorded in the WIDE (16:9) mode.

PICT. EFFECT (Picture effect)

You can add special effects to a picture during recording. [P✦] appears.

▶**OFF**

Does not use [PICT. EFFECT] setting.

SEPIA

Picture appears in sepia.

B&W

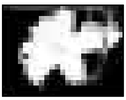
Picture appears in black and white.

PASTEL



Picture appears like a pale pastel drawing.

MOSAIC



Picture appears mosaic-patterned.

REC CTRL (Except for DCR-DVD92E/DVD202E/DVD602E)

See page 80.

SLIDE SHOW

Plays back all the images stored on a disc in sequence (slide show).

Still images start to change to the next one in sequence when you touch [START].
To cancel [SLIDE SHOW,] touch [END].
To pause, touch [PAUSE]. Touch [START] again to restart the slide show.

- You can select the first picture for the slide show with [|◀◀] / [▶▶|] before touching [START].
- You can repeat the slide show by touching [⮌]. The default setting is set to [ON] (repeat slide show).

DEMO MODE

The default setting is [ON] so that you can view the demonstration in about 10 minutes, after you have set the POWER switch to [Movie icon] (Movie) without inserting a disc.

- The demonstration will be suspended in situations such as those described below.
  – When you touch the screen during the demonstration. (The demonstration starts again in about 10 minutes.)
  – When you slide the disc cover OPEN switch.
  – When the POWER switch is set to other than [Movie icon] (Movie).
  – When you set the NIGHTSHOT or NIGHTSHOT PLUS switch to ON (p.35).

DISC SET

Settings for discs (FORMAT/FINALIZE/UNFINALIZE, etc.)

See page 52 for details on selecting setup items.

FORMAT

See page 51.

FINALIZE

See page 44.

UNFINALIZE

See page 50.

DISC TITLE

You can make a title on each disc. As the default, the date when the disc was first used is added as a disc title.

① Touch [P-MENU] → [SETUP] → DISC SET → [DISC TITLE].

② Enter the disc title.

Follow steps **2** to **5** in "Step 4: Changing the disc title" of the "Making the disc compatible with playback on DVD players or DVD drives (Finalizing)" (p.46).

To cancel editing the title, touch [ESC] in step ②.

STANDARD SET

Settings while recording on a disc or other basic settings

(REC MODE/LCD/VF SET/USB SPEED, etc.)

The default settings are marked with ▶.
The indicators in parentheses appear when the item is selected.
See page 52 for details on selecting setup items.

REC MODE (Recording mode)

You can select an image quality of the movie from three levels.

HQ (HQ)
Record in high quality mode (approx. recordable time is up to 20 min).

▶ **SP (SP)**
Records in standard quality mode (approx. recordable time is up to 30 min).

LP (LP)
Increases the recording time (Long Play) (approx. recordable time is up to 60 min).

- **The time in parenthesis indicates the approximate recordable time when recording only a movie on a single-sided disc. When recording on a double-sided disc, this value is applied for both sides.**
- **Your camcorder has a VBR encoding system (p.12) so when you record an object that moves fast, the time available for recording may shorten.**
- If you record in the LP mode, the quality of scenes may be degraded, or scenes with quick movements may appear with a block noise when you play back the disc.

VOLUME

See page 33.

MULTI-SOUND

You can select whether to play back audio recorded using other devices with dual sound or stereo sound.

▶**STEREO**

Plays back with main and sub sound (or stereo sound).

1

Plays back with main sound or the left channel sound.

2

Plays back with sub sound or the right channel sound.

• The setting returns to [STEREO] when you have the power source disconnected from your camcorder for more than 5 minutes.

MICREF LEVEL

You can select the microphone level for recording sound.
Select [LOW] when you want to record exciting and powerful sound in a concert hall, etc.

▶**NORMAL**

Records various surround sounds, converting them into the same level.

LOW

Records surround sound faithfully. This setting is not suitable for recording conversations.

• The setting returns to [NORMAL] when you have the power source disconnected from your camcorder for more than 5 minutes.

SUR MONITOR (Except for DCR-DVD92E/DVD602E)

You can display the direction from which the recording sound comes when recording in 5.1ch mode.

EXT SUR MIC

You can customize the sound setting when using an external microphone (optional). You attach an external microphone (optional) to the Active Interface Shoe (p. 81). Refer to the instruction manuals of the microphone for details.

For DCR-DVD92E/DVD602E

▶ **WIDE STEREO**

Records 2 channel sound with more presence.

STEREO

Records normal stereo sound.

• The setting returns to [WIDE STEREO] when you have the power source disconnected for more than 5 minutes.

Except for DCR-DVD92E/DVD602E

▶**4CH MIC**

Records 4 channel sound, front L/R and rear L/R, converting them to 5.1ch surround sound.

STEREO

Records normal stereo sound.

• The setting returns to [4CH MIC] when you have the power source disconnected from your camcorder for more than 5 minutes.

LCD/VF SET

The recorded picture will not be affected even when you change the setting.

■ LCD BRIGHT

You can adjust the brightness of the LCD screen.

① Adjust the brightness with [–]/[+].
② Touch [OK].

■ LCD BL LEVEL

You can adjust the brightness of the LCD screen's backlight.

▶**NORMAL**

Standard brightness.

BRIGHT

Brightens the LCD screen.

• When you use an AC Adaptor as the power source, [BRIGHT] is automatically selected for the setting.
• When you select [BRIGHT], battery life is slightly reduced during recording.

LCD COLOR

You can adjust the color on the LCD screen with [−]/[+].



Low intensity High intensity

VF B.LIGHT

You can adjust the brightness of the viewfinder.

▶NORMAL

Standard brightness.

BRIGHT

Brightens the viewfinder screen.

- When you connect your camcorder to AC adaptor, [BRIGHT] is automatically selected for the setting.
- When you select [BRIGHT], battery life is slightly reduced during recording.

VF WIDE DISP (DCR-DVD202E/DVD203E/DVD403E/DVD703E/DVD803E) WIDE DISPLAY (DCR-DVD92E/DVD602E/DVD653E)

You can select how a 16:9 aspect ratio picture appears in the viewfinder.

▶LETTER BOX

Normal setting (standard type of display)

SQUEZE (Squeeze)

Expands the picture vertically when black bands appear at the top and bottom of the screen in 16:9 aspect ratio.

- When you can set the POWER switch to (Still), [VF WIDE DISP] or [WIDE DISPLAY] does not appears.

TV TYPE (DCR-DVD202E/DVD203E/DVD403E/DVD703E/DVD803E)

See page 42.

USB SPEED (Except for DCR-DVD92E/DVD202E/DVD602E)

You can select data transfer speed used to transfer data to your computer.

▶AUTO

Sends data by switching automatically between the Hi-Speed USB (USB2.0) and the speed corresponding to USB1.1 (full speed transfer).

FULL SPEED

Sends data corresponding to USB1.1 (full speed transfer).

DATA CODE

You can check the display information recorded automatically (data code) during playback.

▶OFF

Data code is not displayed.

CAMERA DATA

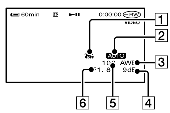
Displays the camera setting data of recorded images.

DATE/TIME

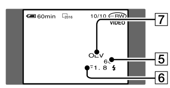
Displays the date and time of recorded images.

CAMERA DATA

Movie

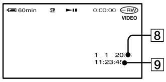


Still image



[1] SteadyShot off
[2] Exposure
[3] White balance
[4] Gain
[5] Shutter speed
[6] Aperture value
[7] Exposure value

DATE/TIME



8 Date

9 Time

- ⚡ appears for an image recorded using a flash.
- The data code is displayed on the TV screen if you connect your camcorder to a TV.
- The indicator toggles through the following sequence as you press DATA CODE on the remote commander: DATE/TIME → CAMERA DATA → OFF (no indication) (Except for DCR-DVD92E/DVD602E).
- Depending on the disc condition, Bars [--:--:--] appear.
- The setting returns to [OFF] when you have the power source disconnected from your camcorder for more than 5 minutes.

DISC REMAIN

▶AUTO

Displays the remaining disc indicator for about 8 seconds in situations such as those described below.

- When you check the disc remaining by sliding the POWER switch down to (Movie) or (Still).
- When you set the POWER to (Movie) or (Still), then press the DISP/BATT INFO to switch the indicator off to on.
- When the remaining capacity of the disc is less than 5 minutes for (Movie) or 30 images for (Still).
- When you start recording from the line input.

ON

Always displays the remaining disc indicator.

REMOTE CTRL (Remote control) (Except for DCR-DVD92E/DVD602E)

The default setting is [ON] so that you can use the Remote Commander (p. 41).

- Set to [OFF] to prevent your camcorder from responding to a command sent by other equipment' remote control.
- The setting returns to [ON] when you have the power source disconnected from your camcorder for more than 5 minutes.

REC LAMP (Recording lamp)

The camera recording lamp will not light up during recording when you set this to [OFF]. (The default setting is [ON].)

BEEP

▶ON

A melody sounds when you start/stop recording, or operate the touch panel.

OFF

Cancels the melody.

DISP OUTPUT

▶LCD PANEL

Shows displays such as the counter on the LCD screen and in the viewfinder.

V-OUT/PANEL

Shows the display also on the TV screen.

SETUP ROTATE

▶NORMAL

Scrolls the setup items downwards by touching ▲.

OPPOSITE

Scrolls the setup items upwards by touching ▲.

A.SHUT OFF (Auto shut off)

▶ 5 min

The camcorder is automatically turned off when you do not operate your camcorder for more than approximately 5 minutes.

NEVER

The camcorder is not automatically turned off.

- When you connect your camcorder to a wall socket, [A.SHUT OFF] is automatically set to [NEVER].

CALIBRATION

See page 110.

TIME/LANGU. (CLOCK SET/AREA SET/LANGUAGE, etc.)

The default settings are marked with ▶.
The indicators in parentheses appear when the item is selected.
See page 52 for details on selecting setup items.

CLOCK SET

See page 23.

AREA SET

Set your local area using ▲/▼ when using your camcorder overseas.
Refer to the World time difference on page 106.

SUMMERTIME

▶ OFF

Does not set the summertime.

ON

Sets the summertime.

You can adjust a time difference in the [AREA SET] and the [SUMMERTIME] setting without stopping the clock.

LANGUAGE

You can select the language to be used on the LCD screen.

You can select from English, Simplified Eanglish, Traditional-Chinese, Simplified-Chinese, French, Spanish, Portuguese, German, Dutch, Italian, Greek, Russian, Arabic, Persian, or Thai.

- Your camcorder offers [ENG[SIMP]] (simplified English) for when you cannot find your native tongue among the options.

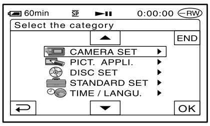
Customizing Personal Menu

You can add desired setup items to Personal Menu, and customize Personal Menu settings for each POWER switch position. This is convenient if you add frequently used setup items to Personal Menu.

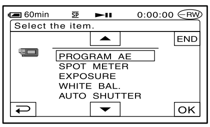
Adding a setup item

You can add up to 27 setup items for each POWER switch position. Delete a less important setup item, if you want to add more.

1 Touch P-MENU → [P-MENU SET UP] → [ADD].



2 Touch ▲/▼ to select a setup category, then touch OK.



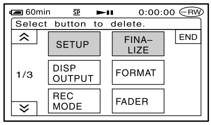
3 Touch ▲/▼ to select a setup item, then touch OK → [YES] → ✕.

The setup item is added to the end of list.

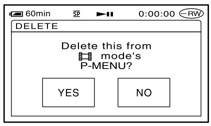
Deleting a setup item

1 Touch P-MENU → [P-MENU SET UP] → [DELETE].

If the desired setup item is not displayed touch ⌃/⌄.



2 Touch the setup item that you want to delete.



3 Touch [YES] → ✕.

- You cannot delete [SETUP], [FINALIZE] and [P-MENU SET UP].

Arranging the order of setup items displayed on Personal Menu

1 Touch [P-MENU] → [P-MENU SET UP] → [SORT].

If the desired setup item is not displayed touch [⌃]/[⌄].

2 Touch the setup item you want to move.

3 Touch [▲]/[▼] to move the setup item to the desired place.

4 Touch [OK].

To sort more items, repeat steps **2** to **4**.

5 Touch [END] → [X].

- You cannot move [P-MENU SET UP].

Initializing the Personal Menu settings (Reset)

Touch [P-MENU] → [P-MENU SET UP] → [RESET] → [YES] → [YES] → [X].

Editing the original data

This function is available only for DVD-RWs (VR mode).

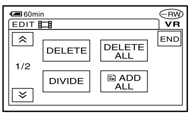
"Original data" refers to the recorded movies and still images data on the disc. Using DVD-RWs recorded in VR mode, you can edit the original images on your camcorder.

Deleting images

1 Slide the POWER switch down repeatedly to light up ▶ (Play/Edit) lamp.

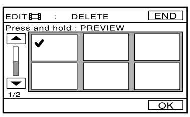
2 Insert the recorded disc into your camcorder.

3 Select the [Movie icon] (Movie) tab or the [Camera icon] (Still image) tab that includes the image you want to delete, then touch [EDIT].



4 Touch [DELETE].

5 Select the image to be deleted.



The selected scene is marked with ✔. Press and hold the image on the LCD screen to confirm the image. Touch [↩] to return to the previous screen.

- You can select several movies and still images at the same time.

6 Touch [OK] → [YES].

- You cannot recover an image once you delete it.

To delete all movies or still images on the disc at the same time

Touch [DELETE ALL] in step **4**.

- If you delete an original movie that is listed in a Playlist (p.74), it is also deleted from the Playlist.
- Deleting scenes may not provide enough space to record movies or still images additionally.
- To delete all the images on the disc and restore original recording capacity, format the disc (p.51).

Dividing a movie

1 Slide the POWER switch down repeatedly to light up ▶ (Play/Edit) lamp.

2 Insert the disc with the movies recorded into your camcorder.

3 Touch the [Movie icon] (Movie) tab → [EDIT].

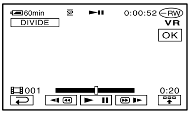
4 Touch [DIVIDE].

5 Touch the scene to be divided.

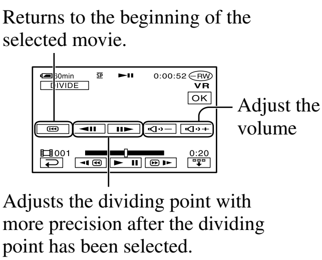
The playback of the selected movie starts.

6 Touch [▶ II] at the point at which you want to divide the movie into scenes.

The movie pauses.



When you touch [button], the operational buttons below appears.



To hide the buttons, touch [button].

- Play and pause toggles as you press [▶ II].
- A slight difference may occur from the point where you touch [▶ II] and the actual dividing point, as your camcorder selects the dividing point based on half-second increments.

7 Touch [OK] → [YES].

- Once you divide a movie, you cannot return it to the state it was in before you divided it.

- If the movie is added in the Playlist, dividing the original movie does not affect the movie in the Playlist.

Creating the Playlist

This function is available only for DVD-RWs (VR mode).

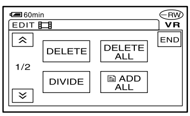
A Playlist is a list showing thumbnails of the still images and movies that you have selected. The original scenes are not changed even though you edit or delete the scenes in the Playlist.

- You can add up to 999 scenes in the Playlist.
- Do not remove the battery pack or the AC adaptor from you camcorder while editing the Playlist. It may damage the disc.

1 Slide the POWER switch down repeatedly to light up (Play/Edit) lamp.

2 Insert the recorded disc into your camcorder.

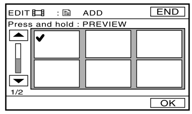
3 Select the (Movie) tab or the (Still image) tab that includes the scene you want to add to the Playlist, then touch [EDIT].



4 Touch [ADD].

Touch / to display [ADD] when [ADD] is not displayed.

5 Select the scene to be added to the Playlist.



The selected scene is marked with ✔. Press and hold the image on the LCD screen to confirm the image. Touch to return to the previous screen.

- You can select several movies and still images at the same time.

6 Touch OK → [YES].

- When you add still images in a Playlist, they are converted automatically to a movie and added to the Movie tab.
  A movie converted from still images is shown with .
  The original still images remain on the disc.
  The resolution of the converted movie may be lower than that of the original still images.

To add all the movies on the disc at the same time

Touch [ADD ALL] in step **4**.

To add all the still images on the disc in a Playlist

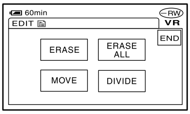
It is recommended that you create a Photomovie (p.76) beforehand, then add it in a Playlist.

Erasing unnecessary scenes from the Playlist

1 Slide the POWER switch down repeatedly to light up (Play/Edit) lamp.

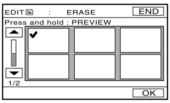
2 Insert the disc with images added in a Playlist.

3 Touch the (Playlist) tab → [EDIT].



4 Touch [ERASE].

5 Select the scene to be deleted from the list.



The selected scene is marked with ✔. Press and hold the image on the LCD screen to confirm the image. Touch [↩] to return to the previous screen.

- You can select several movies and still images at the same time.

6 Touch [OK] → [YES].

To erase all the scenes at the same time

Touch [ERASE ALL] in step **3** → [YES].

- The original scenes are not changed even though you erase the scenes from the Playlist.

Changing the order within the Playlist

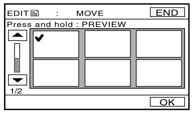
1 Slide the POWER switch down repeatedly to light up (Play/Edit) lamp.

2 Insert the disc with movies added into a Playlist.

3 Touch the (Playlist) tab → [EDIT].

4 Touch [MOVE].

5 Select the scene to be moved.

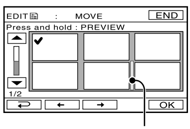


The selected scene is marked with ✔. Press and hold the image on the LCD screen to confirm the image. Touch [↩] to return to the previous screen.

- You can select several movies and still images at the same time.

6 Touch [OK].

7 Select the designated position with [←]/[→].



Move destination bar

8 Touch [OK] → [YES].

- When you have selected multiple scenes, the scenes are moved following the order appeared in the Playlist.

Dividing a movie within the Playlist

1 Slide the POWER switch down repeatedly to light up ▶ (Play/Edit) lamp.

2 Insert the disc with movies added into a Playlist.

3 Touch the (Playlist) tab → [EDIT].

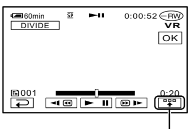
4 Touch [DIVIDE].

5 Select the scene to be divided.

The playback of the selected starts.

6 Touch ▶❚❚ at the point at which you want to divide the movie into scenes.

The movie pauses.



Touch to display functional buttons. See page 73 for details.

- Play and pause toggles as you press ▶❚❚.
- A slight difference may occur from the point where you touch ▶❚❚ and the actual dividing point, as your camcorder selects the dividing point based on half-second increments.

7 Touch OK → [YES].

- The original scenes are not changed even though you divide scenes within the Playlist.

Converting all the still images on a disc to a movie file (Photomovie)

Photomovie converts still images on a disc (JPEG format) to a movie (MPEG format) to play them back on other DVD players or on your computer, and stores them as a Photomovie on the disc. Converted still images are played back in sequence, like a slide show. However, the resolution (pixels) of the converted Photomovie may be lower than that of the original still images. Photomovie categorizes still images as a movie, you can add more images in the Playlist.

1 Slide the POWER switch down repeatedly to light up ▶ (Play/Edit) lamp.

2 Insert the disc with the still images recorded into your camcorder.

3 Touch the (Still image) tab → [EDIT] → [PHOTOMOVIE].

4 Touch OK.

All of the still images on the disc are converted to a single movie file, and added to a movie tab. A movie converted from still images is shown with on the upper right.

• It may take more time to create a Photomovie as more still images are recorded on the disc.
• Still images which are not compatible with your camcorders, such as ones shot using a digital still camera and then copied to a computer can not be converted from still images to a Photomovie.

Playing the Playlist

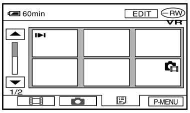
This function is available only for DVD-RWs (VR mode).

1 **Slide the POWER switch down repeatedly to light up ▶ (Play/ Edit) lamp.**

2 **Insert the disc on which the Playlist is added into your camcorder.**

3 **Select the (Playlist) tab.**

A list of the scenes added in the Playlist appears.

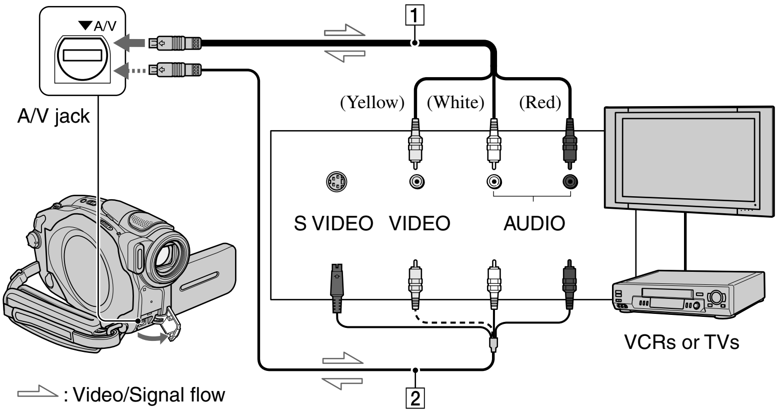


4 **Touch the image from which you want to playback.**

The screen returns to the VISUAL INDEX screen when the Playlist is played back from the selected scene to the end.

Connecting to a VCR or TV

Connect your camcorder to the wall socket using the supplied AC adaptor for this operation (p.17). Refer also to the instruction manuals supplied with the devices to be connected.



1 **A/V connecting cable (supplied)**

Connect to the input jack of the other device.

2 **A/V connecting cable with S VIDEO (optional)**

When connecting to another device via the S VIDEO jack, by using an A/V connecting cable with an S VIDEO cable (optional), higher quality pictures can be produced than with an A/V connecting cable. Connect the white and red plug (left/right audio) and the S VIDEO plug (S VIDEO channel) of the A/V connecting cable with an S VIDEO cable (optional). The yellow plug connection is not necessary.

- Connect the A/V connecting cable to the output jack of a device you are dubbing a picture from, or to the input jack of another device for dubbing a picture from your camcorder.
- When you are connecting your camcorder to a monaural device, connect the yellow plug of the A/V connecting cable to the video jack, and the red (right channel) or the white (left channel) plug to the audio jack on the VCR or the TV.

Dubbing to VCR/DVD devices

You can copy pictures played back on your camcorder to other recording devices, such as VCRs or DVD recorders.
After dubbing them to an HDD (hard disc drive) video recorder, you can enjoy images stored on the hard disk of the recorder.

- To hide the screen indicators (such as a counter, etc.) on the screen of the monitor device connected with the supplied A/V connecting cable, set [DISP OUTPUT] to [LCD PANEL] (the default setting, p.68).

1 Connect your camcorder to the VCR using the A/V connecting cable (supplied).

Connect your camcorder to the input jacks of a VCR or a DVD device. See page 78 for details on how to make the proper connections.

2 Insert the recording media for your VCR or DVD recorder.

If your recording device has an input selector, set it to the input mode.

3 Slide the POWER switch down repeatedly to light up the ▶ (Play/Edit) lamp.

Set [TV TYPE] according to the playback device (p.42) (DCR-DVD202E/DVD203E/DVD403E/DVD703E/DVD803E).

4 Insert the recorded disc into your camcorder.

5 Start the playback on your camcorder, and record it on the recording device.

Refer to the instruction manuals supplied with your recording device for details.

6 When the dubbing is finished, stop your camcorder and the recording device.

- To record the date/time and camera settings data, display them on the screen (p.67).

Recording images from a TV or VCR/DVD device (Except for DCR-DVD92E/DVD202E/DVD602E)

You can record pictures or TV programs from a VCR or TV onto a disc using your camcorder.

- You camcorder can only record from a PAL source. For example, French video or TV programs (SECAM) cannot be recorded correctly. See page 105 for details on TV color system.
- You cannot record TV programs which allow you to record once, or have copy control technology.
- If you use a 21-pin adaptor to input PAL source, you need a dual direction 21-pin adaptor (optional).

1 Connect your camcorder to the TV or VCR/DVD device using the A/V connecting cable (supplied).

Connect your camcorder to the output jacks of a TV or VCR/DVD device. See page 78 for details on how to make the proper connections.

2 If you are recording from a VCR/ DVD device, insert the cassette or DVD disc into the playback device.

3 Slide the POWER switch down repeatedly to light up the ▶ (Play/Edit) lamp.

4 Touch [P-MENU] → [REC CTRL].

If you connected your camcorder to the device which has the S VIDEO jack, touch [SET] → [VIDEO INPUT] → [S VIDEO] → [OK].

- Touch [SET] to change the recording mode or adjust the volume.
- Touch [SET] → [DISC REMAIN] → [ON] to display the remaining disc indicator all the time.

5 Insert a blank disc into your camcorder.

Format the disc if you use a new DVD-RW/DVD+RW (p.51).

6 Start playing the cassette or the disc on the playback device, or select a TV program.

The picture played on the connected device appears on the LCD screen of your camcorder.

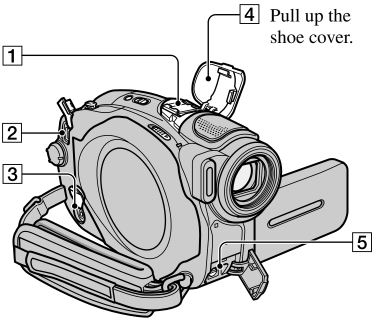
7 Touch [REC] at the point you want to start recording.

8 Touch [■] at the point you want to stop recording.

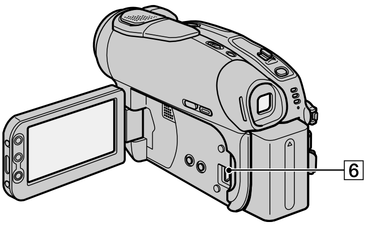
9 Touch [END].

- There may be a time difference between the point where you press [REC] and the actual point that the recording starts/stops.
- You cannot record a picture as a still image even if you press the PHOTO button during recording.
- You cannot record images from a TV with no output jacks.

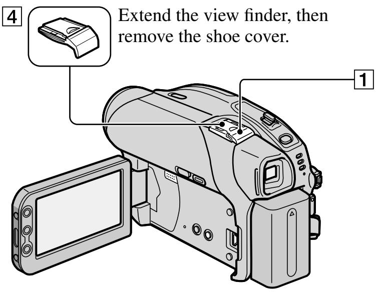
Jacks to connect external devices



DCR-DVD403E/DVD803E:



Except for DCR-DVD403E/DVD803E:



1 Active Interface Shoe Active Interface Shoe

The Active Interface Shoe supplies power to optional accessories such as a video light, a flash, or a microphone. The accessory can be turned on or off as you operate the POWER switch on your camcorder. Refer to the operating instructions supplied with your accessory for details.

- The Active Interface Shoe has a safety device for fixing the installed accessory securely. To connect an accessory, press down and push it to the end, and then tighten the screw. To remove an accessory, loosen the screw, and then press down and pull out the accessory.
- You cannot use an external flash (optional) and the built-in flash at the same time (DCR-DVD403E/DVD803E).
- When an external microphone (optional) is connected, it takes precedence over the internal microphone (p. 34).

2 DC IN jack (p.17)

3 REMOTE jack

- Connect other optional accessories.

4 Shoe cover

5 A/V (audio/video) jack (p.78)

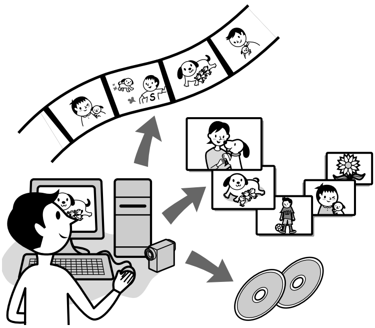
6 (USB) jack (p.82)

(Except for DCR-DVD92E/DVD202E/DVD602E)

Before referring to the "First Step Guide" on your computer

When you install the Picture Package software on a Windows computer from the supplied CD-ROM, you can enjoy the following operations by connecting your camcorder to your computer.

- **Picture Package software does not support Macintosh computer.**
- **The DCR-DVD92E/DVD202E/DVD602E do not support a PC connection. See "Playing back a disc on DVD players, etc." (p.48) to play back images on your computer.**



■ Viewing and Handling Pictures → Picture Package DVD Viewer

You can view the video and still images by selecting from thumbnails. Video and still images are saved in folders by date.

You can delete unnecessary scenes of videos, or create DVDs with menus.

■ Music Video/Slideshow Producer → Picture Package Producer2

You can select your favorite video and still images and easily create an original video with added music and visual styles.

■ Duplicating a disc → Picture Package Duplicator

You can copy the disc you recorded with your camcorder.

- The CD-ROM (supplied) includes the following software.
  - USB Driver
  - Picture Package Ver.1.8
  - "First Step Guide"

About "First Step Guide"

The "First Step Guide" is an instruction manual you can refer to on your computer. This describes basic operations, from initial hookup of your camcorder and computer and making settings, to general operation the first time you use the software stored on the CD-ROM (supplied). After inserting the CD-ROM, referring to "Installing software" (p.83), start the "First Step Guide", then follow the instructions.

About the help function of the software

The Help guide explains all the functions of all the software applications. Refer to the Help guide for further detailed operations after reading the "First Step Guide" thoroughly. To display the Help guide, click the [?] mark on the screen.

System requirements

OS: Microsoft Windows 2000 Professional, Windows XP Home Edition or Windows XP Professional

Standard installation is required. Operation is not assured if the above OS has been upgraded.

CPU: Intel Pentium III 600MHz or faster (Pentium III 1GHz or faster recommended)

Application: DirectX 9.0c or later (This product is based on DirectX technology. It is necessary to have DirectX installed.)/ Windows Media Player 7.0 or later/ Macromedia Flash Player 6.0 or later

Sound system: 16 bit stereo sound card and stereo speakers

Memory: 128 MB or more (256 MB or more recommended)

Hard disk:

Available memory required for installation: 250 MB or more (2GB or more when using Picture Package Duplicator.)/

Available free hard disk space recommended: 6 GB or more (depending on the size of the image files edited)

Display: 4 MB VRAM video card, Minimum 800 × 600 dots, High color (16 bit color, 65 000 colors), DirectDraw display driver capability (this product will not operate correctly at 800 × 600 dots or less, and 256 colors or less.)

Others: USB port (this must be provided as standard)

- Your camcorder is compatible with Hi-Speed USB (USB 2.0).
  You can transfer data at a faster rate using a computer compatible with Hi-Speed USB. When you connect a USB interface not compatible with Hi-Speed USB, the data transfer ratio will be that of USB1.1 (USB full speed).
- Operations are not guaranteed on all the recommended environments.

Installing software

You need to install the software to your Windows computer to enjoy editing your recorded video and still images. The installation is required only for the first time.

1 Confirm that your camcorder is not connected to the computer.

2 Turn on the computer.

Log on as Administrators for installation.
Close all applications running on the computer before installing the software.

3 Place the CD-ROM in the disc drive of your computer.

The installation screen appears.



If the screen does not appear

① Double-click [My Computer] (If you are using Windows XP, click [Start], then [My Computer].)

② Double-click [PICTUREPACKAGE] (Disc drive).*

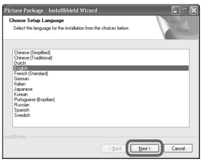
* Drive names (such as (E:)) may vary depending on the computer.

4 **Click [Install].**

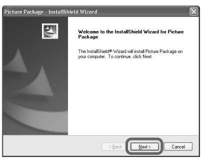


Depending on the operating system on the computer, a message appears notifying you that “First Step Guide”, cannot be installed automatically with the InstallShield Wizard. In such a case, manually copy “First Step Guide” to your computer according to the message’s instructions.

5 **Select the language for the application to be installed, then click [Next].**



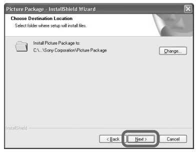
6 **Click [Next].**



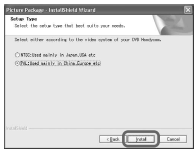
7 **Read [License Agreement], check [I accept the terms of the license agreement] when you agree, then click [Next].**



8 **Select where to save the software, then click [Next].**

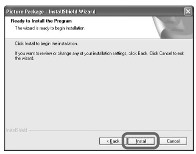


9 **Select [PAL], then click [Install].**



10 **Click [Install] on the [Ready to Install the Program] screen.**

The installation of Picture Package starts.

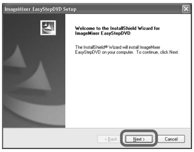


11 **Click [Next], then follow the on-screen instructions to install the “First Step Guide.”**

Depending on the computer, this screen may not be displayed. In such a case, skip to step **12**.

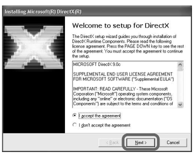


12 Click [Next], then follow the on-screen instructions to install “ImageMixer EasyStepDVD.”

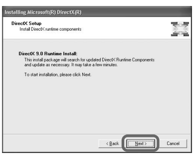


13 If the [Installing Microsoft (R) DirectX(R)] screen is displayed, follow the steps below to install DirectX 9.0c. If not, skip to step 14.

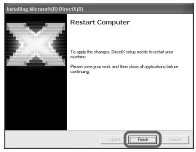
① Read [License Agreement], then click [Next].



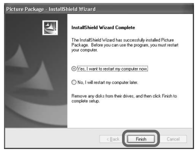
② Click [Next].



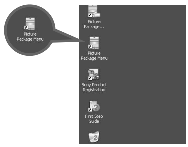
③ Click [Finish].



14 Make sure [Yes, I want to restart my computer now.] is checked, then click [Finish].



The computer turns off once, then starts up again automatically (Restart). The short-cut icons for [Picture Package Menu], [Picture Package Menu destination Folder] (and “First Step Guide,” if installed by steps **11**) appear on the desktop.



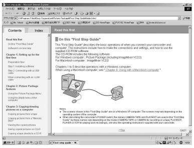
15 Remove the CD-ROM from the disc drive of your computer.

- If you have any questions about PicturePackage, see “For inquires about this software” (p.86).

Viewing "First Step Guide"

Displaying "First Step Guide"

To view "First Step Guide" on your computer, Microsoft Internet Explorer Ver.6.0 or later is recommended.
Double-click the  icon on the desktop.



You can also start by selecting [Start], [Programs] ([All Programs] for Windows XP), [Picture Package], and [First Step Guide], then start up [First Step Guide].

- To view "First Step Guide" in HTML without using automatic installation, copy the desired language folder from the [FirstStepGuide] folder on the CD-ROM, and then double-click [Index.html].
- Refer to "FirstStepGuide.pdf" in the following cases:
  - When printing "First Step Guide"
  - When "First Step Guide" is not displayed correctly due to the browser setting even in recommended environment.
  - When the HTML version of "First Step Guide" is not installed automatically.

For inquires about this software

Pixela User Support Center

Pixela Home Page
http://www.ppackage.com/
– North America (Los Angeles) Telephone: +1-213-341-0163
– Europe (U.K.) Telephone: +44-1489-564-764
– Asia (Philippines) Telephone: +63-2-438-0090

On Copyrights

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Troubleshooting

If you run into any problems using your camcorder, use the following table to troubleshoot the problem. If the problem persists, remove the power source and contact your Sony dealer.

Overall operations/Easy Handycam

The camcorder does not operate even when the power is set to on.

- Disconnect the AC Adaptor from the wall socket or remove the battery pack, then reconnect it after about 1 minute. If the functions still do not work, press the RESET button (p.37) using a sharp-pointed object. (If you press the RESET button, all settings, including the clock setting, are reset, except the Personal Menu items.)
- The temperature of your camcorder is extremely high. Turn off your camcorder and leave it for a while in a cool place.

Buttons do not work.

- During Easy Handycam operation, the available buttons are limited. Cancel Easy Handycam operation (p.27).

You cannot turn the Easy Handycam operation on or off.

- During recording or communicating with another device via USB cable, you cannot turn Easy Handycam operation on or off. Cancel Easy Handycam operation (p.27).

Settings change during Easy Handycam operation.

- Some of the settings of your camcorder are restored to the default setting when you set Easy Handycam operation (p.27).

[DEMO MODE] does not start.

- You cannot view the demonstration when the NIGHTSHOT or NIGHTSHOT PLUS switch is set to ON. Set the NIGHTSHOT or NIGHTSHOT PLUS switch to OFF (p.35).
- Remove the disc from your camcorder (p.24).

Your camcorder vibrates.

- Vibration occurs depending on the condition of the disc. This is not a malfunction.

A vibration is felt in your hand or a faint sound is heard during operation.

- This is not a malfunction.

A motor sound is heard from your camcorder periodically.

- This is not a malfunction.

Your camcorder gets hot during use for a long period.

- This is not a malfunction. Turn off your camcorder and leave it for a while in a cool place.

Batteries/Power sources

The power does not turn on.

- The battery pack is not attached to the camcorder. Attach a charged battery pack to the camcorder (p.17).
- The battery pack is discharged or running low. Charge the battery pack (p.17).
- The plug of the AC Adaptor has been disconnected from the wall socket. Connect it to the wall socket (p.17).

The power abruptly turns off.

- When approximately 5 minutes have elapsed while you do not operate your camcorder, the camcorder is automatically turned off (A.SHUT OFF). Change the setting of [A.SHUT OFF] (p.69), or turn on the power again, or use the AC adaptor.
- The battery pack is discharged or running low. Charge the battery pack (p.17).

The CHG (charge) lamp does not light while the battery pack is being charged.

- Slide the POWER switch up to OFF (CHG) (p.17).
- Attach the battery pack to the camcorder correctly (p.17).
- No power is supplied from the wall socket (p.17).
- The battery charge is completed (p.17).

The CHG (charge) lamp flashes while the battery pack is being charged.

- Attach the battery pack to the camcorder correctly (p.17). If the problem persists, disconnect the AC Adaptor from the wall socket and contact your Sony dealer. The battery pack may be damaged.

The power turns off frequently although the remaining battery indicator indicates that the battery pack has enough power to operate.

- A problem has occurred in the remaining battery time indicator, or the battery pack has not been charged enough. Fully charge the battery again to correct the indication (p.17).

The remaining battery time indicator does not indicate the correct time.

- The temperature of the environment is too high or too low. This is not a malfunction.
- The battery pack has not been charged enough. Fully charge the battery again. If the problem persists, replace the battery pack with a new one (p.17).
- The indicated time may not be correct depending on the environment of use. When you open or close the LCD screen, it takes about 1 minute to display the correct remaining battery time.

The battery pack is quickly discharged.

- The temperature of the environment is too high or low. This is not a malfunction.
- The battery pack has not been charged enough. Fully charge the battery again. If the problem persists, replace the battery pack with a new one (p.17).

A problem occurs when the camcorder is connected to the AC Adaptor.

- Turn off the power, and disconnect the AC Adaptor from the wall socket. Then, connect it again.

LCD screen/viewfinder

An unknown picture appears on the screen.

- The camcorder is in [DEMO MODE] (p.64). Touch the LCD screen or insert a disc to cancel [DEMO MODE].

An unknown indicator appears on the screen.

- They may be warning indicators or messages (p.101).

The picture remains on the LCD screen.

- This occurs if you disconnect the AC Adaptor from the wall socket or remove the battery pack without turning off the power first. This is not a malfunction.

You cannot turn the LCD backlight off.

- During Easy Handycam operation, you cannot turn the LCD backlight on/off using the DISP/BATT INFO. Cancel Easy Handycam operation (p.27).

The buttons do not appear on the touch panel.

- Touch the LCD screen lightly.
- Press DISP/BATT INFO on your camcorder (or DISPLAY on the Remote Commander: Except for DCR-DVD92E/DVD602E) (p.22, 41).

The buttons on the touch panel do not work correctly or do not work at all.

- Adjust the screen ([CALIBRATION]) (p.110).
- If you change the aspect ratio of the picture, the aspect ratio of the buttons of the touch panel and indicators will switch to the selected one (p.26, 60).

The picture in the viewfinder is not clear.

- Extend the viewfinder (p.21).
- Use the viewfinder lens adjustment lever to adjust the lens (p.21).

The picture in the viewfinder has disappeared.

- The picture is not displayed in the viewfinder when the LCD screen is open. Close the LCD screen (p.21).

Disc

The disc cannot be removed.

- Make sure the power source (battery pack or AC Adaptor) is connected correctly (p.17).
- Remove the battery pack from the camcorder, then attach it again (p.17).
- Attach a charged battery pack to the camcorder (p.17).
- The disc is damaged or is dirty with fingerprints, etc. In this case, it may take up to 30 minutes to remove the disc.
- The temperature of your camcorder is extremely high. Turn off your camcorder and leave it for a while in a cool place.
- Moisture condensation has occurred with the disc. Turn off your camcorder and leave it for about 1 hour (P.109).
- Finalizing is interrupted by turning off your camcorder. Turn on your camcorder and remove the disc after finalizing is completed.

Remaining disc space indicator is not displayed.

- Set [DISC REMAIN] to [ON] to always display the remaining disc space indicator (p.68).

The indicators of the disc type and the recording format on the LCD screen are grayed out.

- The disc may be created other than your camcorder. You can play back with your camcorder, but you cannot record additional scenes.

Recording

Refer also to "Adjusting the image during recording" (p.91).

Pressing REC START/STOP or PHOTO does not record movie/still images.

- Slide the POWER switch down repeatedly to light up (Movie) or (Still) lamp.
- Your camcorder is recording the scene you have just shot on the disc. You cannot press PHOTO while [CAPTURE] or ▮▮▮▮ appears on the LCD screen (p.28, 32).
- The disc has run out of space. Use a new disc or format the disc (DVD-RW/DVD+RW only, p.51).
- The DVD-RW (VIDEO mode)/DVD+RW has been finalized. Make a disc to be able to record additional scenes (p.50).
- The temperature of your camcorder is extremely high. Turn off your camcorder and leave it for a while in a cool place.
- Moisture condensation has occurred with the disc. Turn off your camcorder and leave it for about 1 hour (p.109).

The ACCESS lamp lights up even when you stop recording.

- Your camcorder is recording the scene you have just shot on the disc.

The shutter sound is not heard when you record a still image.

- Set [BEEP] to [ON] (p.68).

The external flash (optional) does not work.

- The power of the flash is not turned on, or the flash is not attached correctly.

The actual recording time for movie is less than the expected approximate recording time.

- When you record an object that moves fast, the time available for recording may shorten (p.12, 65).

The recording stops.

- The temperature of your camcorder is extremely high. Turn off your camcorder and leave it for a while in a cool place.
- Moisture condensation has occurred with the disc. Turn off your camcorder and leave it about 1 hour (P.109).

There is a time difference between the point where you press the REC START/STOP button and the point that the recorded movie starts/stops.

- On your camcorder, there may be a slight time difference between the point where you press the REC START/STOP button and the actual point that recording movie starts/stops. This is not a malfunction.

Adjusting the image during recording

Refer also to "Setup items" (p.94).

The auto focus does not function.

- Set [FOCUS] to [AUTO] (p.58).
- The recording conditions are not suitable for auto focus. Adjust the focus manually (p.58).

[STEADYSHOT] does not function.

- Set [STEADYSHOT] to [ON] (p.61).
- [STEADYSHOT] may not work for an excessive camera shake even if [STEADYSHOT] is set to [ON].

The back light function does not function.

- The back light function is cancelled when you set [EXPOSURE] to [MANUAL] (p.57) or select [SPOT METER] (p.56).
- The back light function does not work during Easy Handycam operation. Cancel Easy Handycam operation (p.27).

A vertical band appears when recording candlelight or electric light in the dark.

- This occurs when the contrast between the subject and the background is too high. This is not a malfunction.

A vertical band appears when recording a bright subject.

- This phenomenon is called the smear effect. This is not a malfunction.

Tiny spots in white, red, blue, or green appear on the screen.

- The spots appear when you are recording in [SUPER NS] or [SUPER NSPLUS] , or [COLOR SLOW S]. This is not a malfunction.

The color of the picture is not correctly displayed.

- Set the NIGHTSHOT or NIGHTSHOT PLUS switch to OFF (p.35).

The picture appears too bright on the screen, and the subject does not appear on the screen.

- Set the NIGHTSHOT or NIGHTSHOT PLUS switch to OFF (p.35).

The picture appears too dark on the screen, and the subject does not appear on the screen.

- The LCD screen backlight is switched off. Turn on the LCD backlight by pressing and holding DISP/BATT INFO (p.21).

Flickering or changes in color occurs.

- This occurs when recording pictures under a fluorescent lamp, sodium lamp, or mercury lamp with [PORTRAIT] or [SPORTS]. Cancel [PROGRAM AE] in this case (p.56).

Black bands appear when you record a TV screen or computer screen.

- Set [STEADYSHOT] to [OFF] (p.61).

Remote Commander (Except for DCR-DVD92E/DVD602E)

The supplied Remote Commander does not function.

- Set [REMOTE CTRL] to [ON] (p.68).
- Insert a battery into the battery holder with the +/– polarities correctly matching the +/– marks.
- Remove any obstructions between the Remote Commander and the remote sensor.
- Point the remote sensor away from strong light sources such as direct sunlight or overhead lighting. Otherwise, the Remote Commander may not function properly.
- Remove the conversion lens (optional) as the remote sensor may be obstructed by it.

Another DVD device malfunctions when you use the supplied Remote Commander.

- Select a commander mode other than DVD 2 for your DVD device, or cover the sensor of your DVD device with black paper.

Playing back a disc on your camcorder

You cannot play back a disc.

- Slide the POWER switch down repeatedly to light up ▶ (Play/Edit).
- Check out the disc compatibility (p.13).
- Insert a disc with the recording side facing your camcorder (p.24).
- The disc recorded in other devices may not be played back on your camcorder.

The playback picture is distorted.

- Clean the disc using the cleaning cloth (supplied, p.5).

"?" is indicated on an image in the VISUAL INDEX screen.

- Clean the disc using the cleaning cloth (supplied, p.5).
- Loading of the data may have failed. It may be indicated correctly when you turn off the power and then turn it on again, or remove the disc once and set it again.

No sound or only a low sound is heard when playing back a disc.

- Set [MULTI-SOUND] to [STEREO] (p.65).
- Turn up the volume (p.33).
- Sound is not output when the LCD screen is closed. Open the LCD screen.
- When you record sound with [MICREF LEVEL] (p.66) set to [LOW], the recorded sound may be difficult to hear.

Playing back a disc on other players

You cannot play back the disc or a disc cannot be recognized.

- Clean the disc using the cleaning cloth (supplied, p.5).
- Finalize the disc (p.44).
- A disc recorded in VR mode cannot be played back on a player that does not support VR mode. Check the compatibility in the instruction manual of the playback device.

The playback picture is distorted.

- Clean the disc using the cleaning cloth (supplied, p.5).

"?" is indicated on an image in the DVD menu.

- Loading of the data may have failed when the disc was finalized. For DVD-RW (VIDEO mode)/DVD+RW, make the disc capable of additional recording (p.50), then remake the DVD menu by finalizing the disc again. The DVD menu may be displayed correctly.

Playback freezes for an instant between the scenes.

- The image may freeze for an instant between scenes depending on the DVD device being used.

Playback does not move to the previous scene when you press ⏮.

- If playback crosses 2 titles made automatically by your camcorder when ⏮ is pressed, playback may not move to the previous scene. Select the desired scene from the menu screen. Refer to the instruction manual of the playback device for further information.

Setup items

Setup items are grayed out.

- You cannot select grayed items in the current situation.

You cannot use [PROGRAM AE].

- You cannot use [PROGRAM AE] together with:
  - NightShot/NightShot plus
  - [SUPER NS] or [SUPER NSPLUS]
  - [COLOR SLOW S]
  - [OLD MOVIE]
- [SPORTS] will not work when the POWER switch is set to 📷 (Still).

You cannot use [SPOT METER].

- You cannot use [SPOT METER] together with:
  - NightShot/NightShot plus
  - [SUPER NS] or [SUPER NSPLUS]
  - [COLOR SLOW S]
- If you set [PROGRAM AE], [SPOT METER] is automatically set to [AUTO].

You cannot use [EXPOSURE].

- You cannot use [EXPOSURE] together with:
  - NightShot/NightShot plus
  - [SUPER NS] or [SUPER NSPLUS]
  - [COLOR SLOW S]
- If you set [PROGRAM AE], [EXPOSURE] is automatically set to [AUTO].

You cannot use [WHITE BAL.].

- You cannot use [WHITE BAL.] together with:
  - NightShot/NightShot plus
  - [SUPER NS] or [SUPER NSPLUS]

You cannot use [SPOT FOCUS].

- You cannot use [SPOT FOCUS] together with [PROGRAM AE].

You cannot use [SUPER NS] or [SUPER NSPLUS].

- The NIGHTSHOT or NIGHTSHOT PLUS switch is not set to ON.
- You cannot use [SUPER NS] or [SUPER NSPLUS] together with:
  - [FADER]
  - [D. EFFECT]

[COLOR SLOW S] does not operate correctly.

- [COLOR SLOW S] may not operate correctly in total darkness. Use NightShot/NightShot plus or [SUPER NS] or [SUPER NSPLUS].
- You cannot use [COLOR SLOW S] together with:
  - [FADER]
  - [D. EFFECT]
  - [PROGRAM AE]
  - [EXPOSURE]
  - [SPOT METER]
- You cannot use [COLOR SLOW S] when the NIGHTSHOT or NIGHTSHOT PLUS switch is set to ON.

You cannot use [SELF-TIMER].

- You cannot use [SELF-TIMER] together with [FADER].

You cannot use [FADER].

- You cannot use [FADER] together with:
  - [SUPER NS] or [SUPER NSPLUS]
  - [COLOR SLOW S]
  - [D. EFFECT]

You cannot use [D.EFFECT].

- You cannot use [D. EFFECT] together with:
  - [SUPER NS] or [SUPER NSPLUS]
  - [COLOR SLOW S]
  - [FADER]
- You cannot use [OLD MOVIE] together with:
  - [PROGRAM AE]
  - [PICT. EFFECT]
  - [WIDE SELECT] (DCR-DVD92E/DVD602E/DVD653E)

You cannot use [PICT.EFFECT].

- You cannot use [PICT.EFFECT] together with [OLD MOVIE].

You cannot view [SUR MONITOR].

- You cannot view the [SUR MONITOR] either you are not recording in 5.1ch surround recording, or together with [FADER].

You cannot adjust [LCD BL LEVEL].

- You cannot adjust [LCD BL LEVEL] when power is supplied from the AC adaptor, or when you turn the LCD panel facing out on your camcorder when the POWER switch is set to (movie) or (Still).

Editing (DVD-RW:VR mode)

Unable to edit.

- There are no images are recorded on the disc.
- Unable to edit because of the condition of the image.
- You cannot edit an image protected on another device.

Scenes cannot be added to the Playlist.

- The disc is full, or the added scenes exceed 999. Delete unnecessary scenes or add all the still images by converting them to a movie (Photomovie, p.76).

A movie cannot be divided.

- A movie that is too short cannot be divided.
- A movie with a mark cannot be divided (p.72, 76).
- A movie protected on another device cannot be divided.

A scene cannot be deleted.

- A scene protected on another device cannot be deleted.

Dubbing/Connecting to other devices

Pictures from connected devices are not displayed on the LCD screen or the viewfinder.

- Touch [P-MENU] → [REC CTRL] (Except for DCR-DVD92E/DVD202E/DVD602E) (p.80).

Pictures from connected devices cannot be zoomed.

- You cannot zoom scenes input from the other device on your camcorder.

No sound is heard when playing back a disc.

- The audio will not be output when you connect a device via the S video plug only. Connect the white and red plugs of the A/V connecting cable, too (p.78).

You cannot dub correctly using the A/V connecting cable.

- Set [DISP OUTPUT] to [LCD PANEL] (p.68).
- The A/V connecting cable is not connected properly. Make sure that the A/V connecting cable is connected to the proper jack, i.e. to the output jack of a device you are dubbing a picture from, or to the input jack of another device for dubbing a picture from your camcorder (p.78).

Others

Unable to finalize.

- Battery is running out during finalizing. Use an AC adaptor.
- The disc has already been finalized. If you are using a DVD-RW (VIDEO mode)/DVD+RW, follow the required procedure to record additional material on the disc (p.50).

You cannot edit or record additional material on a disc using other devices.

- You may not be able to edit a disc recorded on your camcorder using other devices.

The disc title cannot be changed.

- You cannot record a disc title on a finalized DVD-R.
- The disc has already been finalized. If you are using a DVD-RW (VIDEO mode)/DVD+RW, follow the required procedure to record additional material on the disc (p.50).
- The disc title may not be changed on your camcorder if the disc title has been made by another device.

A photomovie cannot be created.

- There are no still images.
- There may be a lot of still images on a disc and the remaining disc capacity is low. Delete unneccesary images from the disc (p.72).

The melody or beep sounds for 5 seconds.

- The temperature of your camcorder is extremely high. Turn off your camcorder and leave it for a while in a cool place.
- Moisture condensation has occurred with the disc. Turn off your camcorder and leave it for about 1 hour (p.109).
- Some problems have occurred in your camcorder. Remove the disc and insert it again, then operate your camcorder again.

Connecting to a computer (Except for DCR-DVD92E/DVD202E/DVD602E)

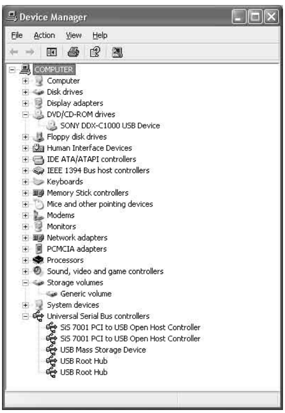
The computer does not recognize your camcorder.

- Install the Picture Package software (p.82).
- Disconnect the cable from the computer and camcorder, then connect it again firmly.
- Disconnect USB device other than the keyboard, the mouse, and the camcorder from the computer.
- Disconnect the cable from the computer and camcorder, restart the computer, then connect them again correctly.
- Confirm the USB driver is correctly installed with the following procedures.

For Windows XP

1. Click [Start], then [Control Panel].
2. Click [Performance and Maintenance], then [System].
   The [System Properties] window appears.
3. Click [Hardware] tab.
4. Click [Device Manager].
   The [Device Manager] window appears.
5. Make sure that [SONY DDX-C1000 USB Device] appears in [DVD/CD-ROM drives], [Generic volume] in [Storage volumes], and [USB Mass Storage Device] in [Universal Serial Bus controllers] respectively.
   When all the devices appear, the USB driver is installed correctly. If any of these devices are not shown, install USB driver.

① Place the supplied CD-ROM in the disc drive on your computer.
② Double-click [My Computer].
③ Right-click [PICTUREPACKAGE] icon (Disc drive)*, then click [Open].
*Drive names (such as (E:)) may vary depending on the computer.
④ Double-click [Driver] → [Setup.exe].



For Windows 2000

1 Click [Start], [Settings], then [Control Panel].

2 Click [System].

The [System Properties] window appears.

3 Click [Hardware] tab.

4 Click [Device Manager].

The [Device Manager] window appears.

5 Make sure that [SONY DDX-C1000 USB Device] appears in [DVD/CD-ROM drives], [Generic volume] in [Storage volumes], and [USB Mass Storage Device] in [Universal Serial Bus controllers] respectively.
When all the devices appear, the USB driver is installed correctly. If any of these devices are not shown, install USB driver.

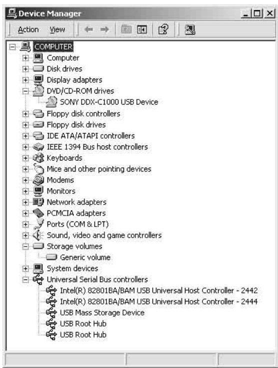
① Place the supplied CD-ROM in the disc drive on your computer.

② Double-click [My Computer].

③ Right-click [PICTUREPACKAGE] icon (Disc drive)*, then click [Open].

*Drive names (such as (E:)) may vary depending on the computer.

④ Double-click [Driver] → [Setup.exe].



An error message appears when you place the supplied CD-ROM in your computer.

- Set the computer display as follows:
  - Windows: 800 × 600 dots or more, High Color (16 bits, 65 000 colors) or more

You cannot use the supplied CD-ROM on a Macintosh computer.

- The supplied CD-ROM is not compatible with a Macintosh computer.

[Cannot start Easy Handycam with USB connected] or [Cannot cancel Easy Handycam with USB connected] appears on the screen of your camcorder.

- You cannot start or cancel the Easy Handycam operation while the USB cable is connected. Disconnect the USB cable from your camcorder first.

You cannot transfer image data from your camcorder to a computer.

- Set [USB SPEED] to [FULL SPEED] in setup item (p.67).

The images or sound of your camcorder cannot be played back correctly.

- When you connect your camcorder to a computer not compatible with Hi-Speed USB (USB 2.0), it may not be able to be played back correctly. However, it does not effect to the images or sounds transferred to your computer.
- When you set the [USB SPEED] to [FULL SPEED] (p.67), it may not be able to be played back correctly. However, it does not effect to the images or sounds transferred to your computer.
- Depending on the computer you use, the played back image or sound may stops temporarily, but this does not effect the images or sound transferred to your computer.

You cannot write data from your computer on a disc in your camcorder using the USB cable.

- The disc is not compatible with your camcorder. Use a disc compatible with your camcorder (p.13).
- You cannot write data from other than the Picture Package on a disc in your camcorder.

Picture Package does not function correctly.

- Close Picture Package, then restart the computer.

An error message appears while operating Picture Package.

- Close Picture Package first, then slide the POWER switch on your camcorder to turn on another lamp.

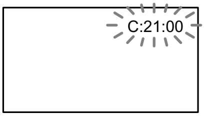
The “First Step Guide” is not displayed correctly.

- Refer to the PDF file of “First Step Guide” (FirstStepGuide.pdf). For details on copying pdf file, see page 86.

Warning indicators and messages

Self-diagnosis display/Warning indicators

If indicators appear on the LCD screen or in the viewfinder, check the following. Some symptoms you can fix by yourself. If the problem persists even after you have tried a couple of times, contact your Sony dealer or local authorized Sony service facility.



C:(or E:) □□:□□ (Self-diagnosis display)

C:04:□□

- The battery pack is not an "InfoLITHIUM" battery pack. Use an "InfoLITHIUM" battery pack (p.107).

C:13:□□

- The disc is faulty. Use a compatible disc with your camcorder (p.13).
- The disc is dirty or has scratches on it. Clean the disc with the supplied cleaning cloth.

C:21:□□

- Moisture condensation has occurred with the disc. Turn off your camcorder and leave it for about 1 hour (p.109).

C:32:□□

- Symptoms that are not described above have occurred. Remove the disc and insert it again, then operate your camcorder again.
- Remove the power source. Reconnect it again and operate your camcorder again.

E:20:□□ / E:31:□□ / E:40:□□ / E:61:□□ / E:62:□□ / E:91:□□ / E:94:□□

- A malfunction that you cannot service has occurred. Contact your Sony dealer or local authorized Sony service facility. Inform them of the 5-digit code, which starts from "E."

100-0001 (Warning indicator pertaining to files)

Slow flashing

- The file is damaged.
- The file is unreadable.

(Warning indicator pertaining to discs)

Slow flashing

- A disc is not inserted.*
- Less than five minutes remains for recording movies.
- Fewer than 30 images can be accommodated in the remaining space.

Fast flashing

- An unrecognizable disc is inserted.*
- A finalized DVD-RW (VIDEO mode) or DVD+RW is inserted into your camcorder when you slide the POWER switch down repeatedly to light up (Movie) or (Still).*
- The disc is fully recorded.*
- A disc that cannot be read or written is inserted, such as the single-sided disc inserted inside out.
- The disc recorded in the different TV color system from your camcorder is inserted when (Movie) is selected.*

⏏ You need to remove the disc*

Fast flashing

- An unrecognizable disc is inserted.
- The disc is fully recorded.
- An error might have occurred with the disc drive in your camcorder.

(Battery level warning)

Slow flashing

- The battery pack is nearly used up.
- Depending on the operating, environment, or battery conditions, may flash, even if there are approximately 20 minutes remaining.

(Moisture condensation warning)*

Fast flashing

- Moisture condensation has occurred with the disc. Turn off your camcorder and leave it for about 1 hour.

(High temperature warning)

Slow flashing

- The temperature of your camcorder is getting higher.

Fast flashing

- The temperature of your camcorder is extremely high.* Turn off your camcorder and leave it for a while in a cool place.

(Warning indicator pertaining to the flash)*

Slow flashing

- Still charging.

Fast flashing

- There is something wrong with the flash.

* You hear a melody when the warning indicators appear on the screen (p.68).

Description of warning messages

If messages appear on the screen, follow the instructions.

■ Battery

Use the "infoLITHIUM" battery pack (p.107)

Battery level is low (p.17, 107)

Old Battery Use a new one (p.107)

■ Drive

Drive error Turn on power again

- A problem may have occurred with the disc drive. Turn off and then on again.

■ Moisture condensation

Moisture condensation Turn off for 1H (p.109)

Condensation Cannot open Try later (p.109)

■ Disc

Overheated Recording disabled

Overheated Cannot open Try later

Recording disabled

- A malfunction has occurred with the disc and it cannot be used.

Disc movie area full   Cannot record movies

• Delete unnecessary scenes (p.72).

Scene number full

• Delete unnecessary scenes (p.72).

⏏ Disc full   Cannot record

• Delete unnecessary scenes (p.72).

Movie recording disabled

• Movies cannot be recorded due to some limitations of the disc. However, you might be able to record still images.

Still recording disabled

• Still images cannot be recorded due to some limitations of the disc. However, you might be able to record movies.

Playback prohibited

• You are trying to play back an incompatible disc with your camcorder.

⏏ Disc finalized   Cannot record on disc

• A finalized DVD-R cannot be recorded. Use a new disc.

⏏ Need to unfinalize

• To record on the finalized DVD-RW (VIDEO mode), unfinalize it (p.50).

⏏ Disc error   Remove disc

• The incompatible disc with your camcorder is inserted. Your camcorder cannot recognize the disc because of malfunctions such as scratches, or the disc is not set correctly.

⏏ Format error

• The disc recorded in the different format code from your camcorder. Formatting the disc may enable you to use the disc on your camcorder (DVD-RW/DVD+RW only) (p.51).

Access error

• An error occurred during reading or writing the disc.

Data error

• An error occurred during reading or writing the disc.

■ Flash

Charging…   Cannot record still images

• You are trying to record a still image while the flash is charging.

The strobe cannot charge   Not available

• A malfunction has occurred with the strobe and disable charging.

■ Lens cover

Lens cover not fully open   Turn power off then on (p.20)

Lens cover is not closed   Turn the power off once (p.20)

■ Easy Handycam

Cannot start Easy Handycam (p.27)

Cannot cancel Easy Handycam (p.27)

Cannot start Easy Handycam with USB connected (p.27)

Cannot cancel Easy Handycam with USB connected (p.27)

Invalid during Easy Handycam operation (p.27)

No recording in Easy Handycam operation (p.27)

- The DVD+RW has been finalized. Make a disc to be able to record additional scenes (p.50).

■ Other

Please connect AC adaptor

- You are trying to finalize or fomat a disc, or making a disc available for additional recording after finalizing with the battery capacity low. Use the AC Adaptor as the power source to prevent the battery from wearing out in the middle of those operations.

Playlist full

- You cannot create the playlist exceeding 999 scenes.
- You cannot add still images in a Playlist due to the lack of remaining capacity on the disc.

Cannot divide

- You cannot divide still images converted to a movie.
- You cannot divided a movie that is extremely short.

Data protected

- The disc has been protected with another device.

Copy inhibit

- You cannot copy scenes with the copy protection signal.

Disc cover open, accidentally Turn on power again

Recovering data ⚠ Avoid any vibration

- Your camcorder tries to recover data automatically if the data writing was not performed properly.

Cannot recover data

- Writing data to the disc has failed. Attempts were made to recover the data, but they were unsuccessful.

Using your camcorder abroad

Power supply

You can use your camcorder in any countries/regions using the AC Adaptor supplied with your camcorder within the AC 100 V to 240 V, 50/60 Hz range.

On TV color systems

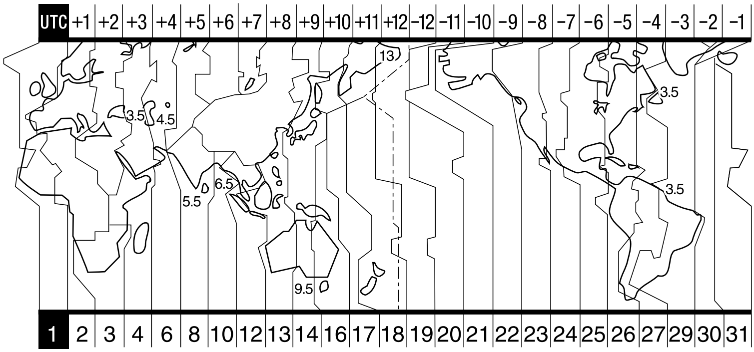
Your camcorder is a PAL system-based camcorder. If you want to view the playback picture on a TV, it must be a PAL system based TV with an AUDIO/VIDEO input jack.

System	Used in
NTSC	Bahama Islands, Bolivia, Canada, Central America, Chile, Colombia, Ecuador, Guyana, Jamaica, Japan, Korea, Mexico, Peru, Surinam, Taiwan, the Philippines, the U.S.A., Venezuela, etc.
PAL	Australia, Austria, Belgium, China, Czech Republic, Denmark, Finland, Germany, Holland, Hong Kong, Hungary, Italy, Kuwait, Malaysia, New Zealand, Norway, Poland, Portugal, Singapore, Slovak Republic, Spain, Sweden, Switzerland, Thailand, United Kingdom, etc.
PAL - M	Brazil
PAL - N	Argentina, Paraguay, Uruguay.
SECAM	Bulgaria, France, Guiana, Iran, Iraq, Monaco, Russia, Ukraine, etc.

Simple setting of the clock by time difference

You can easily set the clock to the local time by setting a time difference when using your camcorder abroad. Set [AREA SET] and [SUMMERTIME] in the TIME/LANGU. (p.23).

World time difference



Area code	Time-zone differences	Area setting
1	GMT	Lisbon, London
2	+01:00	Berlin, Paris
3	+02:00	Helsinki, Cairo
4	+03:00	Moscow, Nairobi
5	+03:30	Tehran
6	+04:00	Abu Dhabi, Baku
7	+04:30	Kabul
8	+05:00	Karachi, Islamabad
9	+05:30	Calcutta, New Delhi
10	+06:00	Almaty, Dhaka
11	+06:30	Rangoon
12	+07:00	Bangkok, Jakarta
13	+08:00	HongKong, Singapore
14	+09:00	Seoul, Tokyo
15	+09:30	Adelaide, Darwin
16	+10:00	Melbourne, Sydney

Area code	Time-zone differences	Area setting
17	+11:00	Solomon Is.
18	+12:00	Fiji, Wellington
19	– 12:00	Eniwetok, Kwajalein
20	– 11:00	Midway Is., Samoa
21	– 10:00	Hawaii
22	– 09:00	Alaska
23	– 08:00	LosAngeles, Tijuana
24	– 07:00	Denver, Arizona
25	– 06:00	Chicago, MexicoCity
26	– 05:00	New York, Bogota
27	– 04:00	Santiago
28	– 03:30	St. John’s
29	– 03:00	Brasilia, Montevideo
30	– 02:00	Fernando de Noronha
31	– 01:00	Azores

About the "InfoLITHIUM" battery pack

This unit is compatible with an "InfoLITHIUM" battery pack (P series). Your camcorder operates only with an "InfoLITHIUM" battery pack.
"InfoLITHIUM" P series battery packs have the InfoLITHIUM P SERIES mark.

What is an "InfoLITHIUM" battery pack?

An "InfoLITHIUM" battery pack is a lithium-ion battery pack that has functions for communicating information related to operating conditions between your camcorder and an optional AC Adaptor/charger (optional).
The "InfoLITHIUM" battery pack calculates the power consumption according to the operating conditions of your camcorder, and displays the remaining battery time in minutes.

Charging the battery pack

- Be sure to charge the battery pack before you start using your camcorder.
- It is recommended that you charge the battery pack in an ambient temperature of between 10°C to 30°C (50°F to 86°F) until CHG (Charge) lamp turns off. If you charge the battery pack outside of this temperature range, you may not be able to charge the battery pack efficiently.
- After charging is complete, either disconnect the cable from the DC IN jack on your camcorder or remove the battery pack.

Effective use of the battery pack

- Battery pack performance decreases when the surrounding temperature is 10°C (50°F) or below, and the length of time you can use the battery pack becomes shorter. In that case, do one of the following to use the battery pack for a longer time.
  – Put the battery pack in a pocket to warm it up, and insert it in your camcorder right before you start taking shots.
  – Use a large capacity battery pack: NP-FP70*/NP-FP90**.
- Frequent use of the LCD screen or a frequent playback, fast forward or reverse operation wears out the battery pack faster. It is recommended that you use a large capacity battery pack: NP-FP70*/NP-FP90**.
- Be sure to slide the POWER switch up to OFF (CHG) when not shooting or playing back on your camcorder. The battery pack is also consumed when your camcorder is in the standby mode or playback is paused.
- Have spare battery packs ready for two or three times the expected recording time, and make trial recordings on a DVD-RW/DVD+RW (optional) before making the actual recording.
- Do not expose the battery pack to water. The battery pack is not water-resistant.

* Supplied with DCR-DVD403E/DVD803E, optional accessory for the models except for DCR-DVD403E/DVD803E.

** Optional accessory for all models.

Remaining battery time indicator

- If the power goes off even though the remaining battery time indicator indicates that the battery pack has enough power to operate, charge the battery pack fully again so that the indication on the remaining battery time indicator is correct. Note, however, that the correct battery indication sometimes will not be restored if the battery is used in high temperatures for a long time or left in a fully charged state, or the battery pack is used frequently. Regard the remaining battery time indication as the approximate shooting time.
- The ▭ mark indicating that there is little remaining battery time sometimes flashes depending on the operating conditions or ambient temperature and environment even if the remaining battery time is approximately 20 minutes.

How to store the battery pack

- If the battery pack is not used for a long time, fully charge the battery pack and discharge it on your camcorder once a year to maintain the proper function. To store the battery pack, remove it from your camcorder and put it in a dry, cool place.
- To use the battery pack up on your camcorder, leave your camcorder in the recording standby without a disc inserted with the [A. SHUT OFF] to [NEVER] in the STANDARD SET in the SETUP display until the power goes off (p.69).

Battery life

- The battery life is limited. Battery capacity drops little by little as you use it more and more, and as time passes. When the available battery time is shortened considerably, a probable cause is that the battery pack has reached the end of its life. Please buy a new battery pack.
- The battery life varies according to how it is stored, the operating conditions, and environment in which each battery pack is used.

Maintenance and precautions

On use and care

- Do not use or store the camcorder and accessories in the following locations.
  - Anywhere extremely hot or cold. Never leave them exposed to temperatures above 60°C (140°F), such as under direct sunlight, near heaters or in a car parked in the sun. They may malfunction or become deformed.
  - Near strong magnetic fields or mechanical vibration. The camcorder may malfunction.
  - Near strong radio waves or radiation. The camcorder may not be able to record properly.
  - Near AM receivers and video equipment. Noise may occur.
  - On a sandy beach or anywhere dusty. If sand or dust gets in your camcorder, it may malfunction. Sometimes this malfunction cannot be repaired.
  - Near windows or outdoors, where the LCD screen, the viewfinder, or the lens may be exposed to direct sunlight. This damages the inside of the viewfinder or the LCD screen.
  - Anywhere very humid.
- Operate your camcorder on DC 7.2 V (battery pack) or DC 8.4 V (AC Adaptor).
- For DC or AC operation, use the accessories recommended in these operating instructions.
- Do not let your camcorder get wet, for example, from rain or sea water. If your camcorder gets wet, it may malfunction. Sometimes this malfunction cannot be repaired.
- If any solid object or liquid gets inside the casing, unplug your camcorder and have it checked by a Sony dealer before operating it any further.
- Avoid rough handling, disassembling, modifying, physical shock, or impact such as hammering, dropping or stepping on the product. Be particularly careful of the lens.
- Keep the POWER switch setting to OFF (CHG) when you are not using your camcorder.
- Do not wrap your camcorder with a towel, for example, and operate it. Doing so might cause heat to build up inside.
- When disconnecting the mains lead, pull it by the plug and not the lead.
- Do not damage the mains lead such as by placing anything heavy on it.
- Keep metal contacts clean.
- Keep the Remote Commander and button-type battery out of children's reach. If the battery is accidentally swallowed, consult a doctor immediately.
- If the battery electrolytic liquid has leaked,
  - consult your local authorized Sony service facility.
  - wash off any liquid that may have contacted your skin
  - if any liquid gets in your eyes, wash with plenty of water and consult a doctor.

■ When not using your camcorder for a long time

- Occasionally turn it on and let it run such as by playing back discs or recording for about 3 minutes.
- Remove a disc from your camcorder.
- Use up the battery pack completely before storing it.

Moisture condensation

If your camcorder is brought directly from a cold place to a warm place, moisture may condense inside your camcorder, on the surface of the disc, or on the pickup lens. This may cause a malfunction to your camcorder. If there is moisture inside your camcorder, [Moisture condensation Turn off for 1H] or [Condensation Cannot open Try later] appears.
The indication will not appear when the moisture condenses on the camera lens.

■ If moisture condensation has occurred

Turn off your camcorder, and leave it for about an hour.

■ Note on moisture condensation

Moisture may condense when you bring your camcorder from a cold place into a warm place (or vice versa) or when you use your camcorder in a humid place as follows:

- You bring your camcorder from a ski slope into a place warmed up by a heating device.
- You bring your camcorder from an air conditioned car or room into a hot place outside.

- You use your camcorder after a squall or a shower.
- You use your camcorder in a hot and humid place.

How to prevent moisture condensation

When you bring your camcorder from a cold place into a warm place, put your camcorder in a plastic bag and seal it tightly. Remove the bag when the air temperature inside the plastic bag has reached the surrounding temperature (after about one hour).

On the LCD screen

- Do not exert excessive pressure on the LCD screen. Blurs appear and it may cause a malfunction of your camcorder.
- If your camcorder is used in a cold place, a residual image may appear on the LCD screen. This is not a malfunction.
- While you are using your camcorder, the back of the LCD screen may heat up. This is not a malfunction.

To clean the LCD screen

If fingerprints or dust make the LCD screen dirty, use the cleaning cloth (supplied) to clean the LCD screen.
When you use the LCD Cleaning Kit (optional), do not apply the cleaning liquid directly to the LCD screen. Use cleaning paper moistened with the liquid.

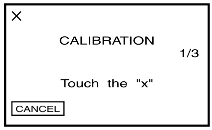
On adjustment of the LCD screen (CALIBRATION)

The buttons on the touch panel may not work correctly. If this happens, follow the procedure below. It is recommended you connect your camcorder to the wall socket using the supplied AC Adaptor during the operation.

① Slide the POWER switch down to light up the ▶ (Play/Edit) lamp.

② Disconnect cables other than that of the AC Adaptor from your camcorder, then remove the disc from your camcorder.

③ Touch P-MENU → [SETUP] → STANDARD SET → [CALIBRATION].
- The screen changes to 16:9 ratio when using 4:3 ratio (DCR-DVD202E/DVD203E/DVD403E/DVD703E/DVD803E).



④ Touch the "×" displayed on the screen with a thin object.
The position of the "×" changes.
Touch [CANCEL] to cancel.

If you did not press the right spot, try the calibration again.

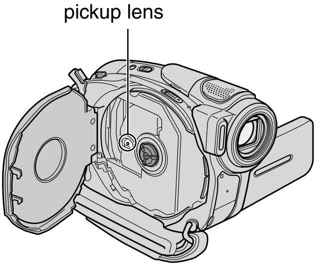
- Do not use a sharp-pointed tool to calibrate the LCD screen.
  Doing so may damage the surface of the screen.
- You cannot calibrate the LCD screen if you have rotated it, or if you have set it with the LCD screen side facing out.

On handling the casing

- If the casing is soiled, clean the camcorder body with a soft cloth lightly moistened with water, and then wipe the casing with a dry soft cloth.
- Avoid the following to avoid damage to the finish.
  - Using chemicals such as thinner, benzine, alcohol, chemical cloths, repellent and insecticide.
  - Handling with above substances on your hands.
  - Leaving the casing in contact with rubber or vinyl objects for a long period of time.

On the pickup lens

- Do not touch the lens inside the disc cover. Keep the disc cover closed except when inserting and removing the disc, to keep dust out.
- When the camcorder does not work because the pickup lens is dirty, clean it with a blower (not supplied). Do not touch the pickup lens directly during cleaning because this may cause the camcorder to malfunction.



Care and storage of the camera lens

- Wipe the surface of the lens clean with a soft cloth in the following instances:
  - when there are fingerprints on the lens surface.
  - in hot or humid locations
  - when the lens is exposed to salty air such as at the seaside.
- Store the lens in a well-ventilated location subject to little dirt or dust.
- To prevent mold, periodically clean the lens as described above. It is recommended that you operate your camcorder about once a month to keep it in optimum state for a long time.

To charge the pre-installed rechargeable battery

Your camcorder has a pre-installed rechargeable battery to retain the date, time, and other settings even when the POWER switch is set to OFF (CHG).
The pre-installed rechargeable battery is always charged while you are using your camcorder but it will get discharged gradually if you do not use your camcorder. The rechargeable battery will be fully discharged in **about 3 months** if you do not use your camcorder at all. However, even if the pre-installed rechargeable battery is not charged, the camcorder operation will not be affected as long as you are not recording the date.

■ Procedures

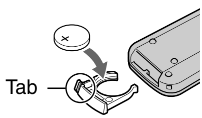
Connect your camcorder to a wall socket using the AC adaptor supplied with your camcorder, and leave your camcorder with the POWER switch turned off for more than 24 hours.

To change the battery of the Remote Commander (Except for DCR-DVD92E/ DVD602E)

① While pressing on the tab, inset your fingernail into the slit to pull out the battery case.

② Place a new battery with the + side facing up.

③ Insert the battery case back into the Remote Commander until it clicks.



Additional Information

WARNING

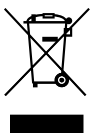
Battery may explode if mistreated. Do not recharge, disassemble or dispose of in fire.

Caution

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer’s instructions.

- A button-type lithium battery (CR2025) is used in the Remote Commander. Do not use batteries other than the CR2025.
- When the lithium battery becomes weak, the operating distance of the Remote Commander may shorten, or the Remote Commander may not function properly. In this case, replace the battery with a Sony CR2025 lithium battery. Use of another battery may present a risk of fire or explosion.

Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems)

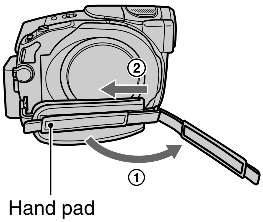


This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment.
By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources.
For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.
Applicable Accessories: Remote Commander

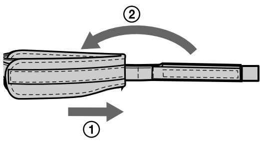
Using the Strap Belt as a wrist strap

This is useful for carrying your camcorder.

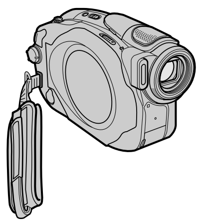
1 Open the hook and loop fastener of the hand pad (①)and remove it from the ring (②).



2 Move the hand pad fully to the right (①), then close the hook and loop fastener again (②).

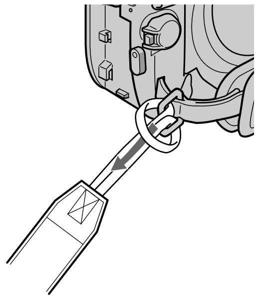


3 Use the Strap Belt as a wrist strap as illustrated.



Attaching the Shoulder Strap

You can attach the Shoulder Strap to the hook for the Shoulder Strap.



Specifications

System

Video compression format	MPEG2/JPEG (Still images)
Audio compression format	DCR-DVD92E/DVD602E Dolby Digital 2ch Dolby Digital Stereo Creator DCR-DVD202E/DVD203E/ DVD403E/DVD653E/ DVD703E/DVD803E Dolby Digital 2/5.1ch Dolby Digital 5.1 Creator
Video signal	PAL color, CCIR standards
Usable discs	8cm DVD-R/DVD-RW/ DVD+RW
Recording format	Movie DVD-R:DVD-VIDEO DVD-RW:DVD-VIDEO (VIDEO mode), DVD- VideoRecording (VR mode) DVD+RW:DVD+RW Video Still image Exif *1 Ver.2.2
Recording/ playback time	HQ: Approx. 20 min SP: Approx. 30 min LP: Approx. 60 min
Viewfinder	Electric viewfinder DCR-DVD92E/DVD602E: monochrome DCR-DVD202E/DVD203E/ DVD403E/DVD653E/ DVD703E/DVD803E: color
Image device	DCR-DVD92E/DVD602E/ DVD653E 3 mm (1/6 type) CCD (Charge Coupled Device) Gross: Approx. 800 000 pixels Effective (Movie) : Approx. 400 000 pixels Effective (Still) : Approx. 400 000 pixels DCR-DVD202E/DVD203E/ DVD703E 3.27 mm (1/5.5 type) CCD (Charge Coupled Device) Gross: Approx. 1 070 000 pixels Effective (Movie) : Approx. 690 000 pixels Effective (Still) : Approx. 1 000 000 pixels DCR-DVD403E/DVD803E 5.9 mm (1/3 type) CCD (Charge Coupled Device) Gross: Approx. 3 310 000 pixels Effective (Movie): Approx. 2 048 000 pixels Effective (Still): Approx. 3 048 000 pixels
Lens	DCR-DVD92E/DVD602E/ DVD653E: Carl Zeiss Vario-Tessar Filter diameter:30mm (1 3/16 in.) Optical:20×, Digital:40×, 800× F=1.8-3.1 DCR-DVD202E/DVD203E/ DVD703E: Carl Zeiss Vario-Tessar Filter diameter:30mm (1 3/16 in.) Optical:12×, Digital:24×, 480× F=1.8-2.5 DCR-DVD403E/DVD803E: Carl Zeiss Vario-Sonnar T* Filter diameter:30mm (1 3/16 in.) Optical:10×, Digital:20×, 120× F=1.8-2.9
Focal length	DCR-DVD92E/DVD602E/ DVD653E f=2.3 - 46 mm (3/32 - 1 13/16 in.) When converted to a 35 mm still camera For movies: 44 - 880mm (1 3/4 - 34 3/4 in.) For still images: 44 - 880mm (1 3/4 - 34 3/4 in.) DCR-DVD202E/DVD203E/ DVD703E f=3.0 - 36 mm (1/8 - 1 7/16 in.) When converted to a 35 mm still camera For movies: 46 - 628.5mm (1 13/16 - 24 3/4 in.) (16:9 mode)*2 48 - 576mm (1 15/16 - 22 3/4 in.) (4:3 mode) For still images: 40 - 480mm (1 5/8 - 19 in.) DCR-DVD403E/DVD803E f=5.1 - 51mm (7/32 - 2 1/8 in.)

	When converted to a 35 mm still camera For movies: 42.8 - 495mm (1 11/16 - 19 1/2 in.) (16:9 mode)*2 45 - 450mm (1 13/16 - 17 3/4 in.) (4:3 mode) For still images: 37 - 370mm (1 1/2 - 14 5/8 in.)
Color temperature	[AUTO], [ONE PUSH], [INDOOR] (3 200 K), [OUTDOOR] (5 800 K)
Minimum illumination	DCR-DVD92E/DVD403E/DVD602E/DVD653E/DVD803E 5 1x (lux) (F1.8) 0 lx (lux) (in the NightShot/NightShot plus function)*3 DCR-DVD202E/DVD203E/DVD703E: 7 1x (lux) (F1.8) 0 lx (lux) (in the NightShot plus function)*3

*1 "Exif" is a file format for still images, established by the JEITA (Japan Electronics and Information Technology Industries Association). Files in this format can have additional information such as your camcorder's setting information at the time of recording.

*2 In 16:9 mode, the focal length figures are actual figures resulting from wide angle pixel readout.

*3 Objects unable to be seen due to the dark can be shot with infrared lighting.

- Manufactured under license from Dolby Laboratories.

Input/Output connectors

DCR-DVD92E/DVD202E/DVD602E

Audio/Video output	10 pin connector Video signal: 1 Vp-p, 75 Ω (ohms), unbalanced Luminance signal: 1 Vp-p, 75 Ω (ohms), unbalanced Chrominance signal: 0.3 Vp-p, 75 Ω (ohms), unbalanced Audio signal: 327 mV (at Load impedance 47 kΩ (kilohms)), Output impedance less than 2.2 kΩ (kilohms)
REMOTE jack	Stereo mini-minijack (Ø 2.5 mm)

DCR-DVD203E/DVD403E/DVD653E/DVD703E/DVD803E

Audio/Video input/output	10 pin connector Input/Output auto switch Video signal: 1 Vp-p, 75 Ω (ohms), unbalanced Luminance signal: 1 Vp-p, 75 Ω (ohms), unbalanced Chrominance signal: 0.3 Vp-p, 75 Ω (ohms), unbalanced Audio signal: 327 mV (at Load impedance 47 kΩ (kilohms)), Input impedance more than 47 kΩ (kilohms), Output impedance less than 2.2 kΩ (kilohms)
USB jack	mini-B
REMOTE jack	Stereo mini-minijack (Ø 2.5 mm)

LCD screen

Picture	DCR-DVD92E/DVD602E/DVD653E: 6.2 cm (2.5 type) DCR-DVD202E/DVD203E/DVD403E/DVD703E/DVD803E: 6.9 cm (2.7 type, aspect ratio 16:9)
Total number of pixels	123 200 (560 ×220)

General

Power requirements	7.2 V (battery pack) 8.4 V (AC adaptor)
Average power consumption (when using the battery pack)	During camera recording using LCD DCR-DVD92E/DVD602E: 3.4W DCR-DVD653E: 3.4W DCR-DVD202E/DVD203E/DVD703E: 3.5W DCR-DVD403E/DVD803E: 4.7W Viewfinder DCR-DVD92E/DVD602E: 3.0W DCR-DVD653E: 3.0W DCR-DVD202E/DVD203E/DVD703E: 3.0W DCR-DVD403E/DVD803E: 4.3W

Operating temperature	0°C to + 40°C (32°F to 104°F)
Storage temperature	-20°C to + 60°C (-4°F to + 140°F)
Dimensions (Approx.)	DCR-DVD92E/DVD202E/ DVD203E/DVD602E/ DVD653E/DVD703E: 57 × 87 × 131mm (2 1/4 × 3 1/2 × 5 1/4 in.) (w×h×d) DCR-DVD403E/DVD803E 62 × 93 × 133mm(2 1/2 × 3 3/4 × 5 1/4 in.) (w×h×d)
Mass (Approx.)	DCR-DVD92E/DVD202E/ DVD203E/DVD602E/ DVD653E/DVD703E: 440 g (15 oz) main unit only 500 g (1 lb 1 oz) including the NP-FP50 rechargeable battery pack and disc DCR-DVD403E/DVD803E 520 g (1 lb 2 oz) main unit only 620 g (1 lb 5 oz) including the NP-FP70 rechargeable battery pack and disc
Supplied accessories	See page 16.

AC Adaptor AC-L25A/L25B

Power requirements	AC 100 - 240 V, 50/60 Hz
Current consumption	0.35 - 0.18 A
Power consumption	18W
Output voltage	DC 8.4V*
Operating temperature	0°C to + 40°C (32°F to 104°F)
Storage temperature	-20°C to + 60°C (-4°F to + 140°F)
Dimensions (Approx.)	56 × 31 × 100 mm (2 1/4 × 1 1/4 × 4 in.) (w×h×d) excluding the projecting parts
Mass (Approx.)	190 g (6.7 oz) excluding the mains lead

* See at the label of AC adaptor for other specifications.

Rechargeable battery pack

NP-FP50:DCR-DVD92E/DVD202E/DVD203E/DVD602E/DVD653E/DVD703E

Maximum output voltage	DC 8.4V
Output voltage	DC 7.2V
Capacity	4.9 wh (680 mAh)
Dimensions (Approx.)	31.8 × 18.5 × 45.0 mm (1 5/16 × 3/4 × 1 13/16 in.) (w×h×d)
Mass (Approx.)	40 g (1.5 oz)
Operating temperature	0°C to + 40°C (32°F to 104°F)
Type	Li-ion

NP-FP70:DCR-DVD403E/DVD803E

Maximum output voltage	DC 8.4V
Output voltage	DC 7.2V
Capacity	9.8 wh (1360 mAh)
Dimensions (Approx.)	31.8 × 33.3 × 45.0 mm (1 5/16 × 1 5/16 × 1 13/16 in.) (w×h×d)
Mass (Approx.)	85 g (3 oz)
Operating temperature	0°C to + 40°C (32°F to 104°F)
Type	Li-ion

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